

# SCHOLASTIC COACH

PER

MAY, 1947 ★ 25c



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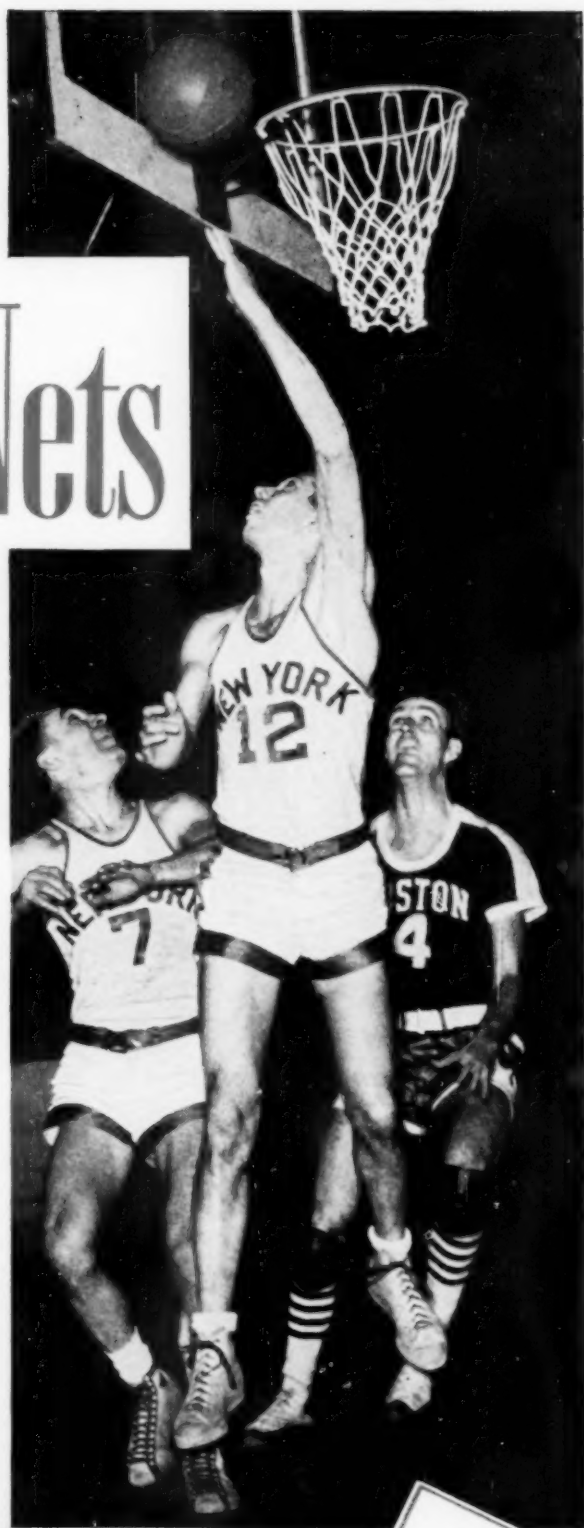
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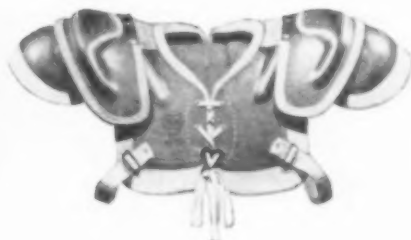


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# SCHOLASTIC COACH

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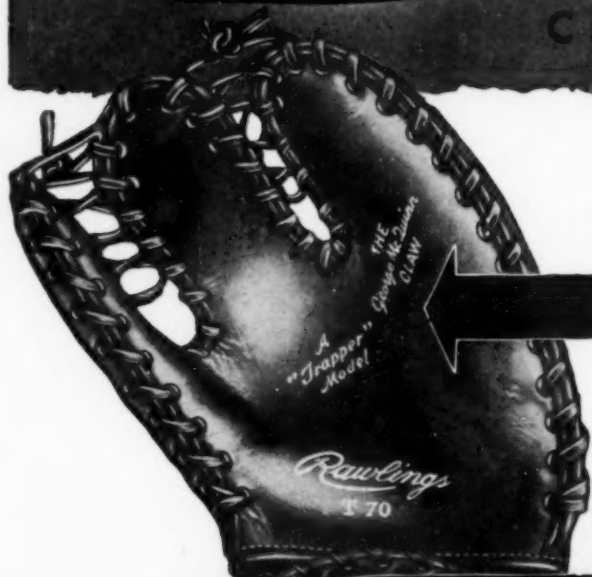




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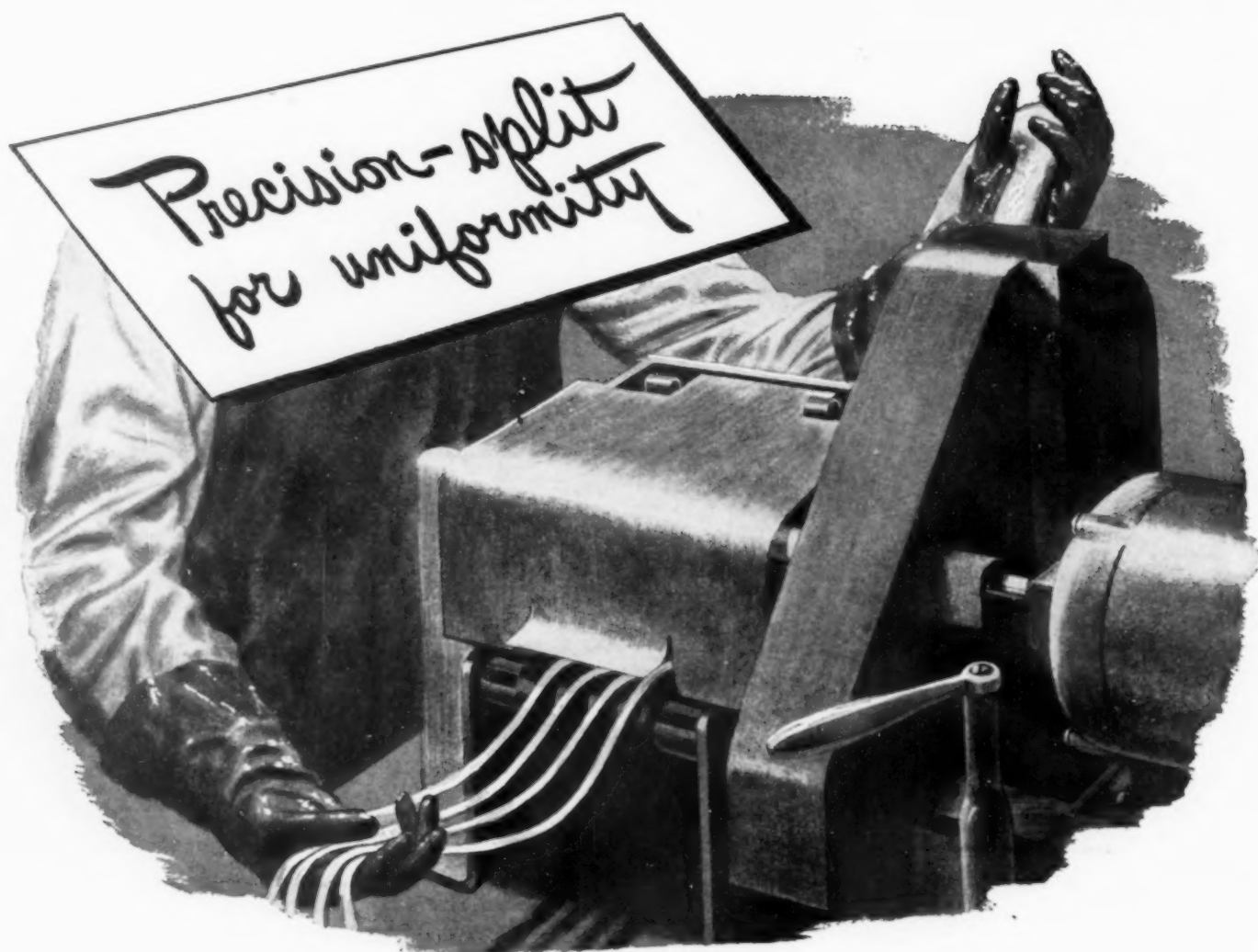


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# 1947 State Finals

**L**ET it be said immediately—basketball is the nation's No. 1 high school sport. If you have any doubts, look at the compendium of the 1947 state championships (pp. 12-13) and read the reports that start on this page and continue for ten more. Then you'll join us in shouting, "Colossal! Stupendous! Gigantic!"

At least 11 of the states heard from reported record-cracking attendances. These were: Michigan, Pennsylvania, Florida, Georgia, Missouri, Nevada, South Dakota, Texas, Colorado, Washington, and Alabama.

Note the preponderance of southern states. The East and West may as well face it. From now on, they'll have to share the basketball headlines with the South.

Once strictly football-baseball country, the territory below the Mason-Dixon line is now a hoop hot-bed. This tremendous activation of interest is reflected in the rising calibre of college teams. No fewer than four southern teams—Kentucky, North Carolina, Texas, and North Carolina St.—ranked with the best last season.

Insofar as the traditional basketball capitals are concerned (Iowa, Ohio, Illinois, Indiana, etc.), interest remained at fever pitch, with the S.R.O. signs out even earlier than usual.

Seating the fans is becoming an acute problem in these hoop-mad locales. Ohio, for instance, in an effort to allow as many fans as possible to witness the games, eliminated the traditional double-header format and staged its last six contests in single sessions.

The plan worked out fine until the



*Allentown Sunday Cat-Chronicle*

**Everybody wants to get into the act when the Pennsylvania title is at stake.**

title playoff, when 7,500 people had to be turned away!

Eight states forwarded suggestions for improving the game. The year-old four-minute rule (stopping the clock on every dead ball during the last four minutes of play) proved the outstanding bone of contention. Five states singled it out for adverse comment. The recommendations for improving the game follow:

- Hold officiating clinics. Keep coach on bench. Administer fouls in last four minutes as technicals. (Colorado)
- Reduce final four-minute period to two minutes. Withhold 10-second rule until defense has retreated beyond center line. (Kansas)
- Standardize officiating through pre-season clinics. (Nevada)
- Improve spectator sportsmanship. (New Mexico)
- Return center jump to game. (Vermont)

- Eliminate four-minute rule. (Virginia)
- Eliminate present rule for last four minutes of play. (West Virginia)
- Do something to keep game moving in last four minutes. (Wyoming)

## PENNSYLVANIA

### Three straight for Allentown

**C**LIMAXING the most successful tournament in state history, Allentown won its third straight Class A crown and Irwin captured its first Class B title before gym-packed crowds.

Allentown defeated Duquesne, Western Pennsylvania regional champions, 46-42, before a crowd which over-taxed the 8,100-seat capacity of the U. of Penn Palestra.

Irwin, making its P.I.A.A. debut, won by a 45-38 count over Weatherly, in a game for which the 2,800-seat capacity of the U. of Pittsburgh Stadium was woefully inadequate.

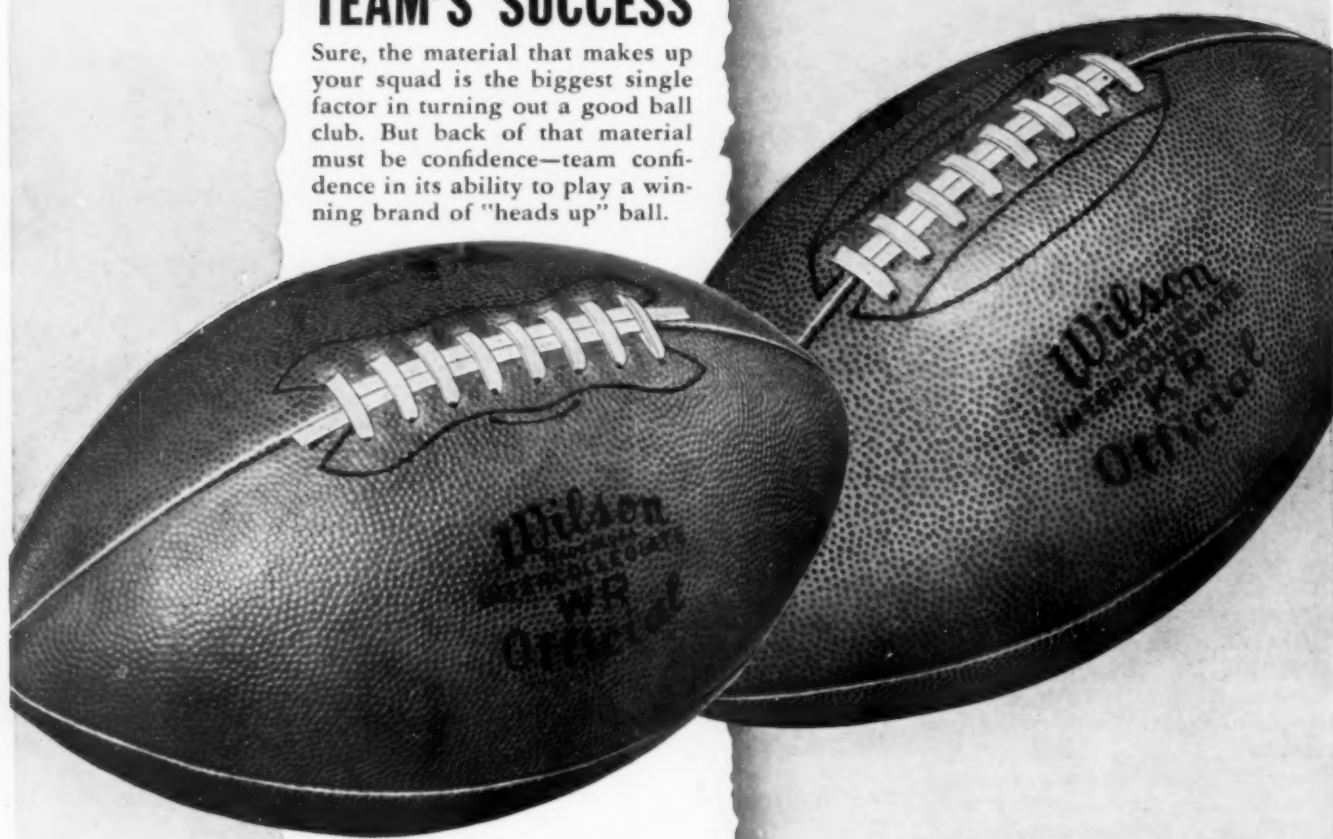
(Continued on page 16)

## National Round-up of High School Champions



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TODAY IN SPORTS EQUIPMENT

# SQUAD DETAILS

by JACK COOMBS

I HAVE been asked so many times about the duties of a baseball coach that I would like to take this opportunity to pass on my ideas on practice routine and game guidance to coaches who have not had much experience in handling young players.

The first duty of a coach, after he has selected his squad, is to formulate his attack and defense. He should expect his players to make a lot of misplays and errors of judgment, and should refrain from unjust criticism and sarcastic remarks.

These have no place in good coaching. Calm criticism does far more good. A player who knows he has made a misplay or error of judgment is sensitive enough about it. So are the boys on the bench. They all take the game to heart.

The wise coach is aware of this and carefully guards against cutting, stinging and uncalled-for remarks. He may mumble a few cusswords under his breath, but he never allows his squad to hear them.

Like the major league manager, the good coach makes a close study of his personnel and gets to know each player's ability, disposition and habits. He attempts in every way to win each man's confidence. To do this, he must be clean and above board in his dealings with them.

Above all he must learn the offensive strength of each player. This will stand him in good stead in difficult offensive situations. He is, or

should be, the sole adviser to his team on offense. No offensive play should be made without his approval or command.

One of the reasons for this is his players' inexperience. A young player cannot clearly carry in mind the offensive strategy of the game. He has enough to think about on defense. He should not be burdened with the responsibility for the offensive tactics as well. A bunt or a hit-and-run play, for example, should never be left to a boy's discretion.

The coach frequently must also tell his team just what to do on defense, especially when the tying or winning run is on base. He must not shirk this responsibility, and he should never second-guess any of his players.

The day after a game it is well to discuss and criticize in a friendly manner any mistakes that were made. The boys who made mental, not physical errors, should be criticized and their mistakes pointed out in detail.

Those who played heads-up ball should be given credit. *Give credit when credit is due.* Each mistake and each good play should be pointed out and impressed upon the minds of the whole squad. The practice for the following afternoon should be arranged so that the errors of omission and commission can be demonstrated.

Neatness of uniforms is a reflection

on the coach. This is particularly significant on "away" games. Good coaches do not allow their squads to go on a trip without being neatly dressed. The same should hold true on the field. A player should be shown how to put on his uniform. The correct procedure is as follows:

1. Put on the undershirt.
2. Adjust the supporter over the bottom of the shirt.
3. Slip on the top shirt.
4. Put on the inner socks.
5. Draw outer hose over them.
6. Turn pants inside out and pull the bottoms of the pants-legs up to and over the knees.
7. Adjust the garters low enough below the knees so that the extra length of pants-leg, when rolled down below the knee toward the feet, forms a padding for the bones on the outside of each leg just below the knee joint. This padding (about two inches in width) protects the bones against sliding injuries.
8. Stand up and tie on the hip pads over the outer and the inner shirts. When adjusted properly, these pads protect the body from the waist line almost to the knees.
9. Now lift the pants into proper

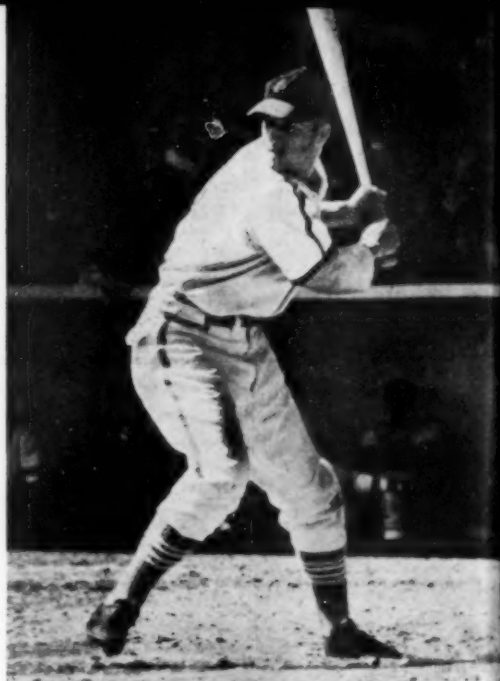


Press Association

Smooth, easy-wheeling Hal Newhouser, baseball's greatest southpaw, serving up a fast ball.

## STAN MUSIAL • TED WILLIAMS

**W**HILE most good batters have their little idiosyncracies, they all observe certain basic fundamentals—as these sequences of the two greatest hitters in baseball prove. Compare the first picture of Musial with the second of Williams, for instance. Note how both hitters cock their bats by pivoting their front shoulders inward, gathering power for the swing. Musial hitches his front leg before stepping and definitely lifts his foot off the ground. Williams steps out with a fairly straight leg and slides, rather than lifts, his foot—which, technically, is more correct. Now compare the third pictures in each sequence. Note that both men hit off a stiff right leg. The other leg is bent at the knee with the foot up on the toe. Their head action is particularly noteworthy. Notice how they keep their heads “in there” right through contact, with the eyes glued on the ball. Schoolboy batters often pull their heads away from the pitch. (Press Association photos.)



position by merely taking hold of the belt and pulling up.

10. Adjust the sliding pants within the pants.

If these instructions are followed, the player will present a neat appearance and will be properly protected. Lay particular stress on the roll of the pants downward over the garter. It is vital to build up a roll of ample deepness to protect the small bone which protrudes just below the knee joint.

The coach should have a regular practice schedule for the field. The players should not be kept on the field too long, but each should be kept busy all the time. My own schedule works that way, and it has proven very satisfactory.

After the squad has been picked, limit the practice to an hour and 15 minutes, devoting most of the time to batting. The pitchers should not work more than ten minutes a day in batting practice. Before taking the mound, they should warm up for about 10 minutes.

If the boy feels his arm is not in good shape, the limb should be given a complete rest. That doesn't mean the boy should sit out a couple

of practices. He should be given some running, shagging flies in the outfield. A pitcher's legs should always be kept in tip-top condition. They are just as vital as the condition of the shoulder and back muscles.

After the first team has been chosen and the batting order arranged, limit the practice to one hour. Allow all players not in this group—pitchers, extra catchers, extra infielders and outfielders—to take their batting practice an hour prior to the arrival of the “A” team. They may bat against some of the pitchers who are not considered regulars.

The “A” team should take the field after the “extras” have had their batting practice. The first thing the “A's” should do is run around the field to loosen their muscles. They should then start batting. This practice should not last more than 45 minutes. After 15 minutes of fielding practice, they should be sent to the showers.

This makes a fine working arrangement. The boys do not leave the field tired. They are eager to get back to their school work and

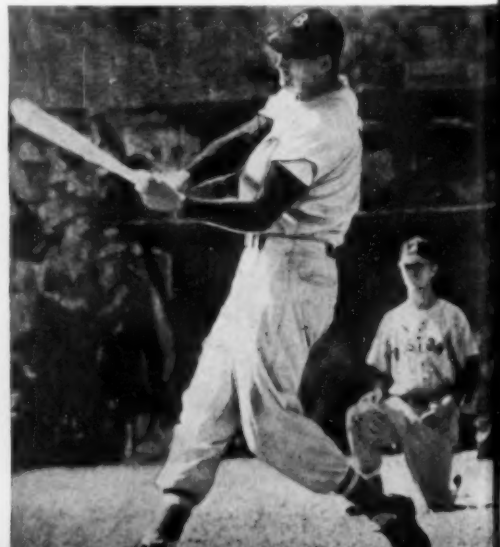
eager to get back on the field for the next practice.

In early practice a regular game between the first and second teams, or the second and third teams, will prove very beneficial. This gives the coach an opportunity to criticize both the defensive and the offensive play under actual playing conditions.

If a player makes a mistake in his base running or errs on defense, the coach can stop the game and give a full explanation so his words can be heard by all. This gives each player a chance to become more familiar with some of the complicated situations which arise in every game. The coach can also offer words of encouragement and commendation.

In these intra-squad games, I employ a system which I think is unusually helpful. I do not change nine players from offense to defense, and vice versa, after three out. I have the defense stay on the field until nine men are retired. After every third out, a new inning is begun. Any runners on base go to the bench.

This scheme allows a pitcher to







work continuously for three full innings, after which he is sent to the showers immediately and another pitcher summoned to take his place. I have used this system since I started coaching over 25 years ago, I am convinced that it produces the best results.

Much has been said about the use of proper signals. I do not think more than two signals are necessary. The young player cannot apply anything complicated while the game is in progress. He is apt to become excited. So the simpler the offensive signals are, the better will be the hitting and base running.

There should be a steal sign and a hit sign, both of which should be flashed by the coach. He should not delegate this responsibility to someone who has not had the experience to properly advise a runner or batsman.

The signals should be predicated on natural movements. For instance, it is natural for a coach to sit on the bench with his hands on his knees. A very simple set of signals can be evolved from such movements.

The right hand off the knee

might signify a steal; both hands off the knees might signal a hit-and-run on the next ball pitched.

Let's see how this would work. Both the batter and the runner look at the coach after each pitch. The runner sees the right hand is off the knee. That means he must get a good lead and attempt to steal. The batter sees this also and knows the runner is going down.

Now suppose the batter sees both hands off the knees. He thus knows the hit-and-run is on and he must hit the next ball pitched because the runner will be off. (The runner always goes when the right hand is off and the batter always hits when the left hand is off.) Can you think of anything simpler?

Some coaches might say: "There ought to be a squeeze-play signal." Why? What is the squeeze play? It is merely an attempt by a runner on third to steal home, while the batter bunts the pitch.

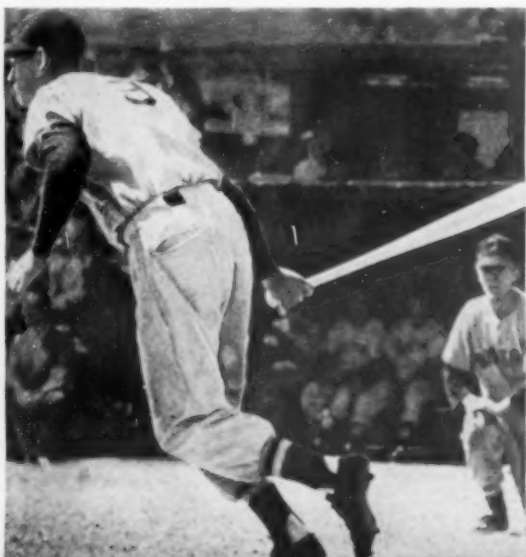
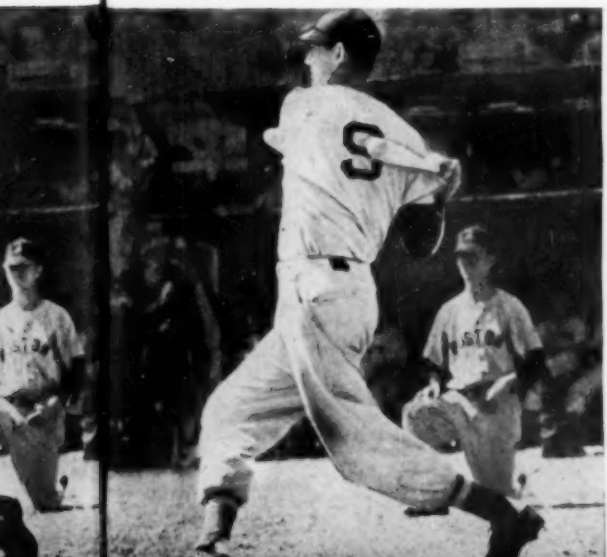
Let's see how the two simple signals would work in this situation. The right hand of the coach comes off the right knee, signifying a steal home. The left hand comes off the left knee, informing the

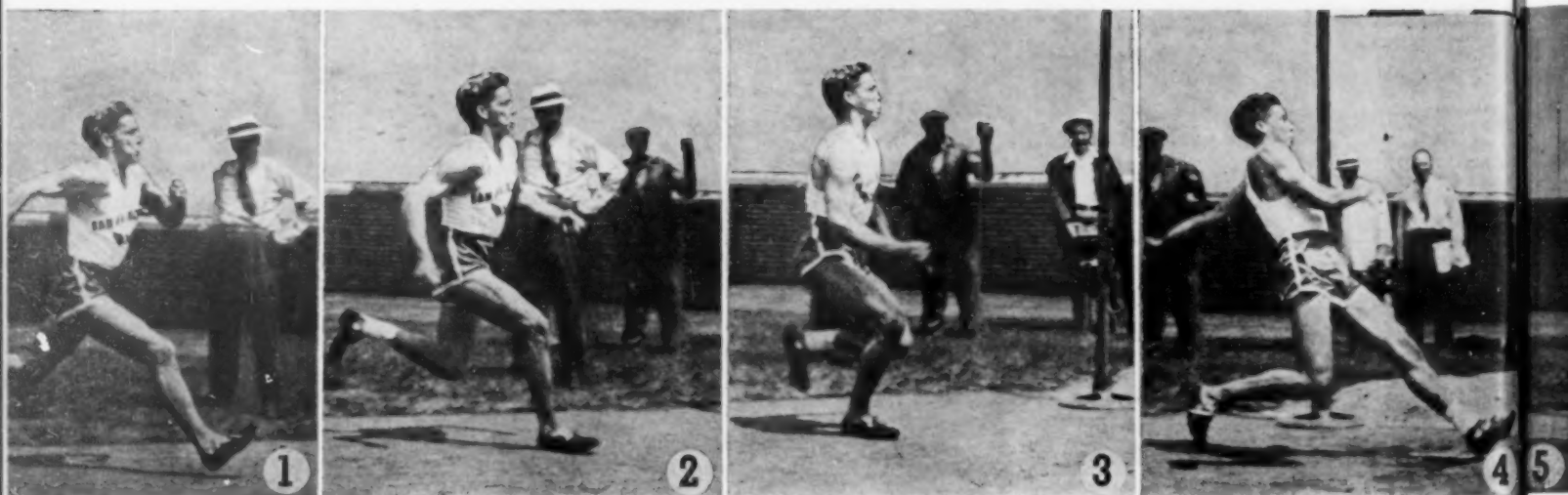
batter he must hit the next pitched ball. The play may be completed easily without confusion to either runner or batter.

Each runner who reaches first base safely with none out should know that the bunt, or sacrifice, play is always the prevailing attack. He is continually looking for this play unless the coach gives him the steal signal.

The batsman should be told before he steps into the batter's box, even before he leaves the bench, what he should do, but he should glance at the coach after each pitched ball because the coach might wish to change his attack on account of the defense situation. Thus there is no need for a bunt signal to the batsman. He has received his instructions before taking his position in the batter's box.

A coach should make certain that every member of his squad knows the rules governing the game. Every season he should review the rules carefully and demonstrate every essential point upon the field. To make a play or a rule vivid to his players, the coach must let them see the play actually executed.





# STEERS Jumping!

by GEORGE T. BRESNAHAN

**T**HE first American competition in the running high jump quite likely took place in 1868, the year the New York Athletic Club was established.

In the 1876 Championships of the Amateur Athletic Union, H. E. Fisher of the New York Athletic Club won first place with a leap of 5 feet 5 inches. Sixty-five years later Lester Steers of the University of Oregon established a mark of 6 feet 11 inches.

During these 65 years, a dozen or so athletes significantly contributed to the art of jumping for height. Among them were Sweeney, 1892-95; Horine and Beeson, 1912-15; Osborn, 1922-28; Spitz, 1931-33; and Steers, 1940-41.

Michael F. Sweeney introduced a style of jump which differed radically from the old scissors, resembling the Eastern style of today. At any rate, Sweeney in 1895 lifted the world's record to 6-5 $\frac{3}{4}$ .

Sweeney's mark stood for 17 years until George Horine of Stan-

ford achieved 6-7. Horine is credited with successfully introducing the "Western style," in which the take-off is from the foot nearest the cross-bar.

Thus Horine and his contemporary, Edward Beeson, differed from the earlier champions, since the drive from the ground in the Eastern style is from the "outside" foot—the one farthest from the cross-bar.

In the Western form employed by both Horine and Beeson (who jumped 6-7 $\frac{5}{16}$ ), clearance was made with the jumper's side toward the cross-bar.

Harold Osborn of the University of Illinois performed with outstanding skill during his college span, 1922-24, and continued jumping with the Illinois Athletic Club for several years after graduation. He established a world mark of 6-8 $\frac{1}{4}$  in 1924, using the Western form.

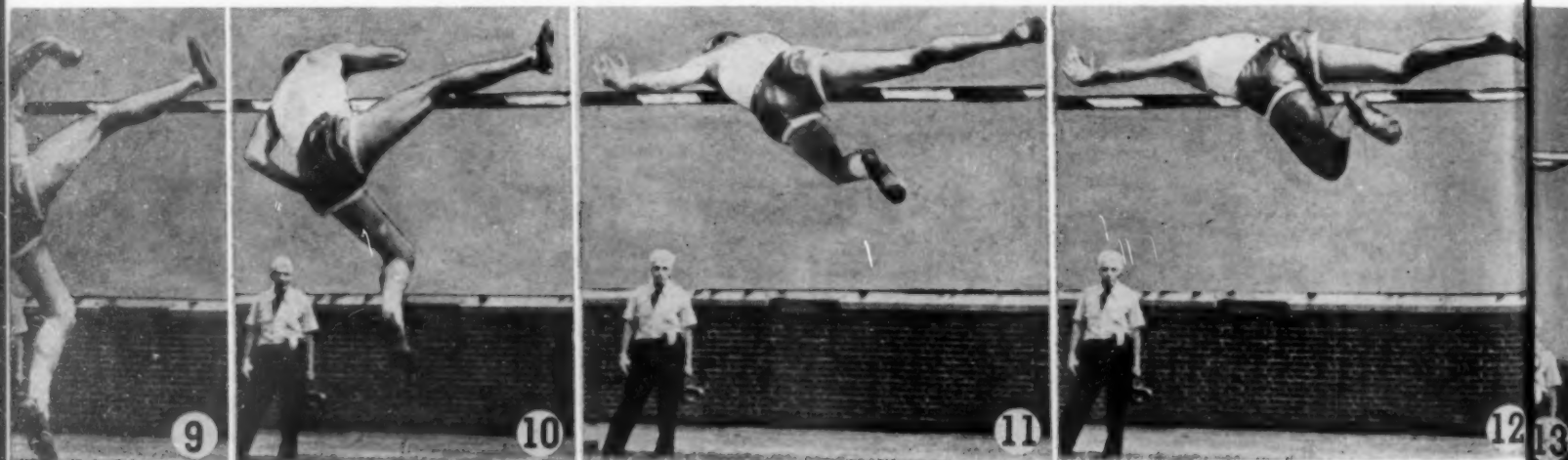
From 1922-1934, our experts debated the legality of the Western jump. Some claimed that because

George T. Bresnahan, track coach at the University of Iowa, is co-author of the best selling track text, *Track and Field Athletics*, and a frequent contributor to *Scholastic Coach*. (See last month's issue for his splendid analysis of the sprint and broad jump events.)

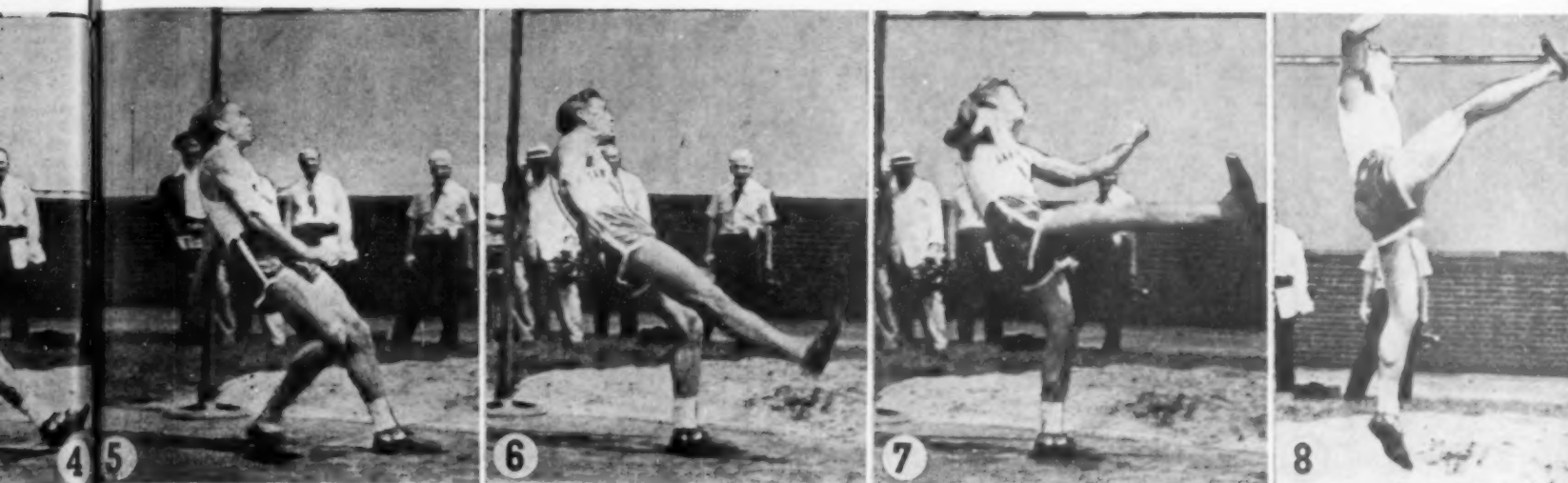
the head preceded the leading foot across the bar, such an effort was a "dive," and should therefore be ruled invalid. Individuals officiating the high jump were required to make decisions on border-line cases, and these rulings were not popular with either the officials, the athletes, or the coaches.

The present-day rule is simple and clear, because it briefly states that "A fair jump is one in which the competitor jumps from one foot." Additional criticism was leveled at the Western form because the jumper, when touching the cross-bar, unintentionally perhaps, contacted it with the upper arm in such a manner that the bar was not displaced, but rather held against the jumping standard.

(Continued on page 50)







**THESE** rare actual-competition pictures of the world's record-holder afford a perfect study of the straddle (belly roll) form of jumping.

**NO. 1:** Steers tries to gain speed during last three strides. Though he generates more speed than average jumper, he obtains fair muscular relaxation in legs.

**NO. 2:** Head and eyes are turned to the bar. The trunk is carried erect.

**NO. 3:** The jumper gathers in preparation for the leap. The trunk is almost vertical.

**NO. 4:** Steers strikes the ground, heel first. This last stride is longer than those preceding it. Steers abruptly checks his forward momentum and tries to transfer the force upwards.

**NO. 5:** The trunk, which has been inclined backward, is being brought forward. The eyes are fixed on the bar. The right leg starts the upswing.

**NO. 6:** The right leg, in the upswing, is practically straight. Since the body weight is not yet over the take-off foot, there is still a backward body lean.

**NO. 7:** Left arm is swung upward to synchronize with right leg. Some critics may claim Steers is leaning too far to left, and is in danger of dropping left shoulder into bar.

**NO. 8:** Excellent form in swing of right leg, extension of left leg, and rock-up on toe. Center of weight is directly over take-off foot.

**NO. 9:** Right leg continues upward at an angle of about 30° to bar. The trunk has barely started to turn. The jumper is confronted with task of keeping left arm from striking bar.

**NO. 10:** Left leg is partially bent, but will later be extended. This is the start of the most critical period of the jump, namely, clearance with take-off (rear) leg. Left arm is being brought backward and upward to avoid contact with bar.

**NO. 11:** The layout is exemplified by line running from the left hand to the right foot. Observe the turn of the trunk.

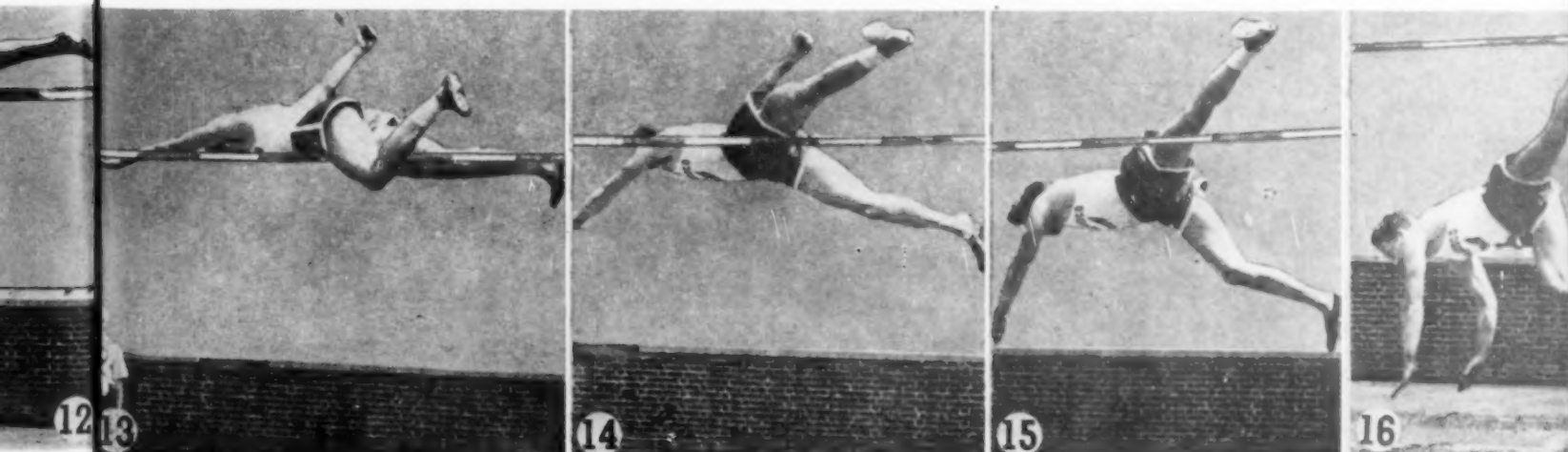
**NO. 12:** The left leg is being carried in a smooth sweeping motion, in contrast with the snap or jerk employed by some jumpers.

**NO. 13:** Right arm is thrown rather high. Steers is cognizant of this and believes it may fault him into turning left hip into bar. "I am trying to get away from that. The right arm should shoot down, and you should roll down and over." Left arm, extended, has cleared bar.

**NO. 14:** The left leg is now straightened. The downward movement of the right leg aids in elevating the left leg.

**NO. 15:** Clearance has been accomplished and relaxed body adjustments are being made.

**NO. 16:** The champion lands in Western style, with three points of body—both hands and the right foot—contacting the pit.





# State High School Basketball Tournaments, 1947

	WINNER	COACH	RUNNER-UP	COACH	SCORE	SEASON RECORD	SCHOOLS COMPETING	ATTENDANCE FINALS
ALABAMA	Phil Campbell	J. Cliff White	Jackson-Scottsboro	J. B. McLendon	23-21	22-2	300	3,500
ARIZONA	Florence	George Ahee	Douglas	Frank Sancer	33-32		63	3,500
ARKANSAS	A—Little Rock B—Donaldson	E. C. Barnes H. Z. Snell	A—Van Buren B—Strong	Presley Askew R. L. Graves	41-35	25-2	400	2,600
CALIFORNIA	NO STATE CHAMPIONSHIP IN CALIFORNIA							
COLORADO	AA—So. Denver A—Durango B—Springfield	Finis Ketchum Dean Shafer Aaron Hale	AA—Boulder A—Rocky Ford B—Stratton	Merle Lefferdink Irvine Ferguson Art Watson	45-36 36-34 33-32	17-1	225	7,000
CONNECTICUT	A—Hillhouse B—Branford C—Old Saybrook	Sam Bender Warren Sampson William Belanich	A—Leavenworth B—Wilcox Tech C—Ellsworth Mem.	William Tracy — Albert Loeffler	43-30 33-31 38-36	16-3	53	5,000
DELAWARE	NO STATE CHAMPIONSHIP IN DELAWARE							
FLORIDA	A—Hillsborough B—Lake City C—Havana	Harold Mosey Jim F. Melton Fred Strange	A—Ft. Lauderdale B—Pompano C—Chumuckla	Clois Caldwell E. P. Carmichael A. L. Gillman			253	
GEORGIA	A—Savannah B—Perry C—Irwinville	Chick Shiver Eric Staples W. C. Childs	A—Lanier-Macon B—Valdosta C—Montezuma	Selby Buck Wright Bazemore W. H. Martin	58-54 29-20 31-24	15-2 28-4 21-3	440	2,000
IDAHO	A—Boise B—Kendrick	Robert S. Gibb Ross Armitage	A—Coeur d'Alene B—Moreland	Elmer Jordan Dale Robins	42-36 28-26	27-2	153	1,500
ILLINOIS	Paris	Ernest Evaland	Champaign	Harry Combes	58-37	40-2	876	7,903
INDIANA	Shelbyville	Frank Barnes	Garfield-Terre Haute	Willard Kehrt	68-58	25-5	792	14,940
IOWA	Davenport	Paul Moon	Sioux City-Central	Harold Stevens	42-23	21-8	912	15,283
KANSAS	AA—Wellington A—Buhler B—Inman	John Floyd Verle Ohmart Garland Matthews	AA—Arkansas City A—Beloit B—Sylvia	Moner Weshe Sidney Smith Albert Shrik	38-30 58-32 39-38	14-4 17-1 15-3	624	6,000
KENTUCKY	Maysville	Earle D. Jones	Brewers	McCoy Tarry	54-40	17-6	500	7,826
LOUISIANA	AA—St. Alloysius A—Natchitochis B—Baker C—Fairview Alpha	Fred Pinkham Willis Blair Joseph Devitt	AA—Lake Charles A—Covington B—Zachary C—Arnaudville	Duncan Farrell — —	35-24 37-33 30-28 33-30		280	
MAINE	A—Bangor B—Patten C—Carmel		Merse-Bath — —		52-37 — —		200	4,000
MARYLAND	NO STATE CHAMPIONSHIP IN MARYLAND							
MASSACHUSETTS	NO STATE CHAMPIONSHIP IN MASSACHUSETTS							
MICHIGAN	Lower Peninsula A—Flint-Northern B—Alma C—SS. Peter and Paul D—Baroda	Lester Ehrbright Victor Hicks Mike Latschak Robert Eisner	Upper Peninsula (Champs.) B—Bessemer C—Norway D—Marquette E—Bergland	Halge Pukema Allen Roberg John H. Willson Allen H. Londo	L. P. 38-28 U. P. 44-45 L. P. 32-20 U. P. 55-54 L. P. 38-29 U. P. 63-48 L. P. 41-32 U. P. 40-39		675	L. P.—12,418 U. P.—6,000
MINNESOTA	Duluth-Denfeld	L. M. Halm	Crosby-Ironton	J. M. Odanovich	46-44		486	16,000
MISSISSIPPI	Belmont	James Fulton	Big Creek	B. C. Roberts	34-27	35-1	500	3,000
MISSOURI	Beaumont-St. Louis	Thomas C. Stanton	Versailles	Jim Ball	59-42	29-1	518	4,200

MINNESOTA	Duluth-Dunfria	L. M. Holm	Crosby-Fronton	J. M. Odanovich	46-44	486	16,000
MISSISSIPPI	Belmont	James Fulton	Big Creek	B. C. Roberts	34-27	35-1	3,000
MISSOURI	Beaumont-St. Louis	Thomas C. Stanton	Versailles	Jim Ball	59-42	29-1	4,200
MONTANA	A-Missoula B-Hamilton	Ed Butzetti Cub Potter	A-Great Falls B-Hardin	Pinkney Falgren Hugh Cottom	38-37	16-8	3,000
NEBRASKA	A-Grand Island B-Lexington C-St. Joseph's D-Sunflower	Aubrey Givens Bill Trupp Tom Slattery George L. Kops	A-Lincoln B-Seward C-Plymouth D-Sacred Heart	Lyle Weyand Tom McLaughlin Darrel Ganzlinger John Penney	40-36	23-0	11,000
NEVADA	A-Basic-Henderson B-Wells	Estes McDaniel George Hamlin	A-White Pine-Ely B-Carlin	Angelo Collis Ken Crawford	41-31 34-25	19-7	3,000
NEW HAMPSHIRE	A-Portsmouth B-Pinkerton C-Lincoln	Murl L. Messersmith Gordon McKernan George Farrell	A-Concord B-Groveton C-Simonds	Richard Martin G. Campbell Norman Hartfiel	38-23	16-4	3,000
NEW JERSEY	IV-Newark Central III-Englewood II-Richtonville I-Port Lee	Henry Finck Tom Morgan Bob Elder John Hardy	IV-Union Hill III-Springfield Reg. II-Weehawken I-Dunellen	George Fallings Walter Hohn Les Purvere Michael Shello	40-37 49-22 44-39 39-34	17-4 25-0	14,500
NEW MEXICO	Carlsbad	Ralph Bowyer	Raton	Larry Madrick	41-22	24-2	4,500
NEW YORK	NO STATE CHAMPIONSHIP IN NEW YORK						
NORTH CAROLINA	AA-Wilmington A-Mount Airy B-Pilot Mountain	Leon Broden Wallace Shelton G. R. Moisinger	AA-Greensboro A-Washington B-West End	R. B. Jamieson Joe Kornegay J. F. Sinclair	42-38 35-34 38-27	15-0	1,800
NORTH DAKOTA	A-Grand Forks B-Minot Model	Glenn Hubbard Leon Lande	A-Bismarck B-New Salem	R. Murdock Lyle Hill	270		5,000 2,500
OHIO	A-Middletown B-Columbiana	Paul Walker John Cabas	A-E Liverpool B-New Knoxville	Merrill Hall R. J. Stauffer	49-27 43-34	19-4 23-1	9,257 7,460
OKLAHOMA	A-Muskogee B-Byng C-Burbank	John A. Grayson Bill Kollar Grover Bradley	A-Capitol Hill B-Purcell C-Boynon	C. B. Speagle Boney Matthews E. R. Haley	35-23 40-30 39-38	24-5	5,500
OREGON	A-Marshfield B-Pleasant Hill	Bill Borchert T. P. Otto	A-Klamath Falls B-Union	Wayne Scott John Comiskey	51-49 33-32		7,000
PENNSYLVANIA	A-Allentown B-Irwin	J. Birney Crum Don Rose	A-Duquesne B-Weatherly	William Lemmer Russ Bubeck	46-42 45-38	28-2 30-1	8,100 2,800
RHODE ISLAND	Westerly	J. Fedirico					
SOUTH CAROLINA	A-Olympia B-Bennettsville C-Kelly-Pinkney	P. B. Durham M. P. Caskey Paul Jeter	A-No. Charleston B-University C-Holly Hill	Hibbie Ayoub H. B. Rhame John L. Wiggins	42-28 48-39 27-21	20-4 16-2 18-2	3,500
SOUTH DAKOTA	A-Sturgis B-Webster	B. W. Woodie George Houk	A-Sioux Falls B-Eureka	Irv Nelson Louis Papendick	43-40 33-25	16-4 23-6	5,100 5,365
TENNESSEE	Soddy-Daisy	Ernest Eldridge	West-Nashville	Emmett Strickland	52-26	44-2	2,528
TEXAS	AA-El Paso A-East Mountain B-Johnson City	C. D. Jarvis E. J. Woodruff E. J. Hyatt	AA-Jefferson-S. Antonio A-Bowie B-Marfa	Harry Hamilton R. E. Mattingly Bodie Hunter	27-22 35-22 16-14	19-1 26-2 21-3	7,000 4,500 4,000
UTAH	A-Granite B-Grantsville	Cecil Baker J. Sterling Anderson	A-Box Elder B-American Fork	Earl Ferguson Don Overly	28-25 37-29		5,000 5,000
VERMONT	A-Rutland B-West Rutland C-St. Michael's	Leo Keefe Frank Hinchey Joseph Moore	A-Bennington B-Winooski C-Plainfield	Carl Williams John Herbert George Allison	36-34	21-2	3,000
VIRGINIA	I-Granby-Norfolk II-Norton	Don Griffin Sam Lawson	I-Geo. Washington II-Radford	A. E. Doran H. H. Hobgood	58-33 35-30	22-1 22-1	3,600
WASHINGTON	A-Pasco B-Collax	Vernon Moreman Richard Felber	A-Vancouver B-St. John	Marshall Shields Melvin Whitlock	52-44 42-37		11,500
WEST VIRGINIA	Huntington East	Aldo Palleti	So. Charleston	Bill Weber	47-44	24-4	5,000
WISCONSIN	Beloit	Carl Nelson	Murley	Carl Vergamini	56-37	10-6	13,500
WYOMING	A-Cheyenne B-Ten Sleep	C. H. Blanchard John D. Stroud	A-Evanston B-Shoshoni	Chester Christiansen Bob Porter	38-29	28-0	4,200

# Backhand Drive

(SARAH PALFREY COOKE)

**O**NE of the soundest strokers of our time, petite Sarah Cooke demonstrates the mechanics of her backhand drive in these fine action pictures posed exclusively for LOOK Magazine.

While moving into proper position, Sarah adjusts her grip and starts her racket back with both hands (1). At the same time, she brings her right foot over so that her right side is facing the net with her weight over the rear foot (2).

The racket is brought back as far as is comfortable (3), with the arm slightly flexed, the knees bent, and the eyes trained on the ball (4). As the racket swings forward, the weight flows along with it.

Although Sarah drops the racket a bit low in 5, she will hit nicely through the ball. Note the nicely bent, relaxed knees.

Sarah makes contact slightly in front of her right hip at full arm's reach (6), with the racket practically parallel to the ground.

The racket is not arrested after impact (7). It follows through in the direction of the shot, finishing above the shoulder (8). The weight is now on the right foot, and the left arm is helping maintain balance.

A word as to the grip: From the normal forehand grip, the right hand is shifted almost a quarter turn to the left, bringing the palm more on top of the handle. For additional support, the fingers may be spread slightly and the thumb placed diagonally across the back side of the shaft.

The grip is shifted while the player is moving into position.



1



2



3



4



5



6



7



8



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**Gulf Sani-Soil-Set**

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# National Round-up of High School Champions

(Continued from page 5)

In the three-year-old Class B division, as in the 28-year Class A tourney, the "sold-out" signs had to be displayed days before the top games in the series.

By winning the A crown, Allentown, coached by J. Birney Crum, equalled the P.I.A.A. record of three successive state crowns and a total of four state championships established by Lower Merion.

The Duquesne team, coached by William Lemmer, put up a brilliant battle. The 46-42 final score shattered all championship records for total points and for points scored by both winning and losing teams.

—A. NORMAN GAGE

## GEORGIA

### Savannah take it away!

**B**ATTLING their way through a fast field, Chick Shiver's Savannah Blue Jackets defeated the Lanier Poets, 58-54, to annex their second straight Class A championship.

Savannah advanced to the finals by winning from Boys Catholic of Augusta in the opening round, 45-18; and by coming from behind in the third quarter of their semi-final against Jordan of Columbus to win 56-51.

Lanier's path to the finals was featured by one-sided victories. It defeated Rome, 62-36; Tech High of Atlanta, 61-40; and Richmond Academy of Augusta, 59-28.

The final was a hard-fought affair with the lead alternating throughout. But Savannah had just enough power left to forge in front near the end and to maintain its lead.

New champions were crowned before record crowds in both Class B and C, Perry winning the B title and Irwinville taking C honors.

The B finale provided a brilliant exhibition of basketball. Valdosta took the lead in the first quarter, 5-2,

but Perry forged in front at the half, 10-9. After the rest period, Valdosta recaptured the lead. But Perry rallied to go out in front at the end of the third quarter, 18-12. It continued applying the pressure in the final period, and wrapped up the ball game, 29-20.

While this marked the 14th time the Perry Panthers have qualified for the state tourney and the third time they have played in the finals, the victory was their first.

Perry had one of the smallest teams in the tourney, its tallest man being only 5-10. But Coach Eric Staple's club made up for height in other ways—deadly shooting, excellent ball hawking, and speed to burn. Their entire play was characterized by a degree of teamwork that made it impossible to single out an individual star.

Irwinville, making its first appearance in a state tourney, pulled the upset of the C play-offs in the second round, when it dumped the defending champs, Greenville, 31-30. In the finals, the upsetters had too much height for Montezuma, and took home the bacon, 31-24.

—S. F. BURKE

## OHIO

### Middies repeat 1946 win

**M**IDDLETOWN repeated as Class A champion and Columbiana took Class B laurels in the first state tournament held in Columbus since 1944.

In successfully defending its championship, Middletown became the first A school to repeat since Dayton Stivers racked up three straight from 1928-30. The 1947 triumph was Middletown's third state cage crown. Ironically, each title was won under a different coach. Royner Greene now at Cornell was coach in 1944; George Houck was at the helm last season, and Paul Walker this year. Walker succeeded Houck when the latter re-

signed because he couldn't find a home in Middletown for his family.

After losing its final game of the regular season, Middletown won eight straight in the tournament and finished with a record of 19 victories and six defeats.

With Shelby Linville and George McChesney, two lanky boys, doing yeoman service on both defense and offense, and cool-headed Carl Lansaw sparking the defense, the Middies showed its versatility in the state tournament. They were at their best under fire and left little doubt as to their superiority. Their fast-breaking offense and air-tight man-to-man defense baffled the opposition in the semi-final and title affairs. They made a runaway of the finals, beating East Liverpool, 47-29.

Columbiana, coached by John Cabas, accomplished what they just barely missed back in 1945. They banged out a 43-34 triumph over New Knoxville in the deciding game after blasting Corning, 77-48, in the semi-final. The 77-point total bettered the Clippers' own previous high of 72 in the 1945 regionals.

The Clippers played with the finesse of a Class A school, using their height and speed to good advantage all the way through. In annexing their first state title, Columbiana recorded 25 victories and only one defeat, the lone setback coming at the hands of Salem, a Class A school; which means the new champs were undefeated in their own classification.

This year, in an effort to allow as many fans as possible to take in the games, six single game sessions were staged. This worked out fine until the championship night. While there were enough seats for the first five games, the title tilt attracted a crowd of 9,257, a new record for any session in the history of the Ohio High School Athletic Association, founded in 1923. About 7,500 fans were turned away.

—LOU BERLINER

(Continued on page 18)



Perry High, Georgia's first-time B champions.



Middletown makes it two in a row in Ohio.

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WITH WOVEN ALL-ELASTIC POUCH



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Team of giants, Huntington East of West Virginia.



Pasco's 50-point-a-game team, Washington champions.

## WASHINGTON

### Bulldogs bite off title

**T**HE Pavillion at the U. of Washington was capacity packed with nearly 12,000 spectators at the Class A playoff between Pasco and Vancouver.

Pasco entered the tournament as underdogs, but when they beat Mount Baker, 53-30, the experts sat up and took notice. Pasco next out-shot Olympia, 65-45, and then nipped South Kitsap in the tourney thriller. After trailing 27-20 at the half, the Bulldogs cropped up with a 32-point second half to win, 52-49.

In the big wind-up, Pasco jumped into an early lead over Vancouver, kept applying pressure, and was never headed, winning 52-44.

On their way to the crown, the Bulldogs broke three all-time scoring records. Their 65 points against Olympia broke the old record of 64 for the most team points scored in one game. The total number of points for that game, 110, also set a new mark.

Pasco's 223 points for four games created another record, beating Everett's old mark by 23 points.

The Bulldogs' lanky center, Dean Dion, came within four points of the all-time individual scoring total set by Walt Bless back in 1931. Dion dunked 29 field goals and 10 fouls for 68 points, an average of 17 per game.

The Bulldogs also had the distinction of scoring at least 50 points in every game.

The four-day show set a new attendance mark of 53,000.

—VERNON MOREMAN

## WEST VIRGINIA

### Fast breakers win

**T**HE 34th state tourney produced another "first" for the records when Huntington East swept through the meet in its first trip to the finals, beating South Charleston, 47-44, in the wind-up.

A big, rugged club, with four men standing six feet or better, the champions' most effective weapons were a fast break and a loose zone defense. Their fast break was unquestionably the deciding factor in the finale against South Charleston.

While Charleston's 6-6 center, Heinz, dominated the rebounds under both boards, East had enough height to capture the ball a sufficient number of times and score before the slow-moving Heinz could get under the hoop.

Had East been better shooters, their margins of victory would have been greater all the way through the tourney. They missed considerably on their fast break and, when set shooting over the defense, their percentage was not high.

While Huntington East is a deserving champion, the caliber of ball was not up to that of previous years. None of the eight finalists used a set offense, being content to get the ball and go.

Defensively, the tournament produced a variety of ideas. The man-to-man disciples (1) pressed all over the court, (2) picked up men as they crossed the back-court line, and (3) dropped well back and covered the opponents as they came down into offensive territory.

The zone adherents presented variances of the 3-2 plan, ranging from a very tight under-the-basket zone (letting opponents shoot from outside) to the loose, almost man-to-man, aggressive zone of the champions.

—V. EVERETT BRINKMAN



Soddy-Daisy, Tennessee, the nation's most winning quintet (44 victories).

## TENNESSEE

### Upsa Daisy!

**P**ECULIARLY, a team that was good enough to win only third place in the regionals is the 1947 state champs. Soddy-Daisy, rebounding from a semi-final loss in regional play, came back strong to wallop defending-champion West High of Nashville, 52-26, before 2,528 paid spectators in the finals.

Coach "Deacon" Eldridge's boys opened the state tourney with a 42-32 win over big, rugged Memphis Central; beat Father Ryan of Nashville, 53-36; then, to the surprise of everybody, completely outclassed the fast-breaking defending titleholders from West.

West had gained the title round with a close 35-33 victory over Knoxville Central and a 57-33 breeze over Jackson.

"Mr. Basketball of Tennessee" is Tom Maynor, Soddy-Daisy center, who was named the most valuable player in the tournament. Just behind him was teammate Willard "Chicken" Lovelady, a sharpshooter who led the tourney's scorers with 43 points in three games. Harold Johnson, all-state football guard from Jackson, was second high scorer with 42 markers.

The West defeat, attributable in part to the loss by injury of its ace scorer, Harry Moneypenny, ended one of the most phenomenal winning streaks in recent tourney history. Coach Emmett Strickland's team had amassed 23 straight tourney wins over a two-year span. Coach Strickland's over-all record stands at 129 victories against only 16 defeats.

—HAROLD HARRIS

## SOUTH DAKOTA

### Scoopers win in spades

**A**N unheralded Sturgis team, with an enrollment of 290, conquered Sioux Falls, 43-40, in a fitting climax to a spectacular season. A week before Webster had swept to its second successive B championship despite the graduation of four of its five 1946 starters.

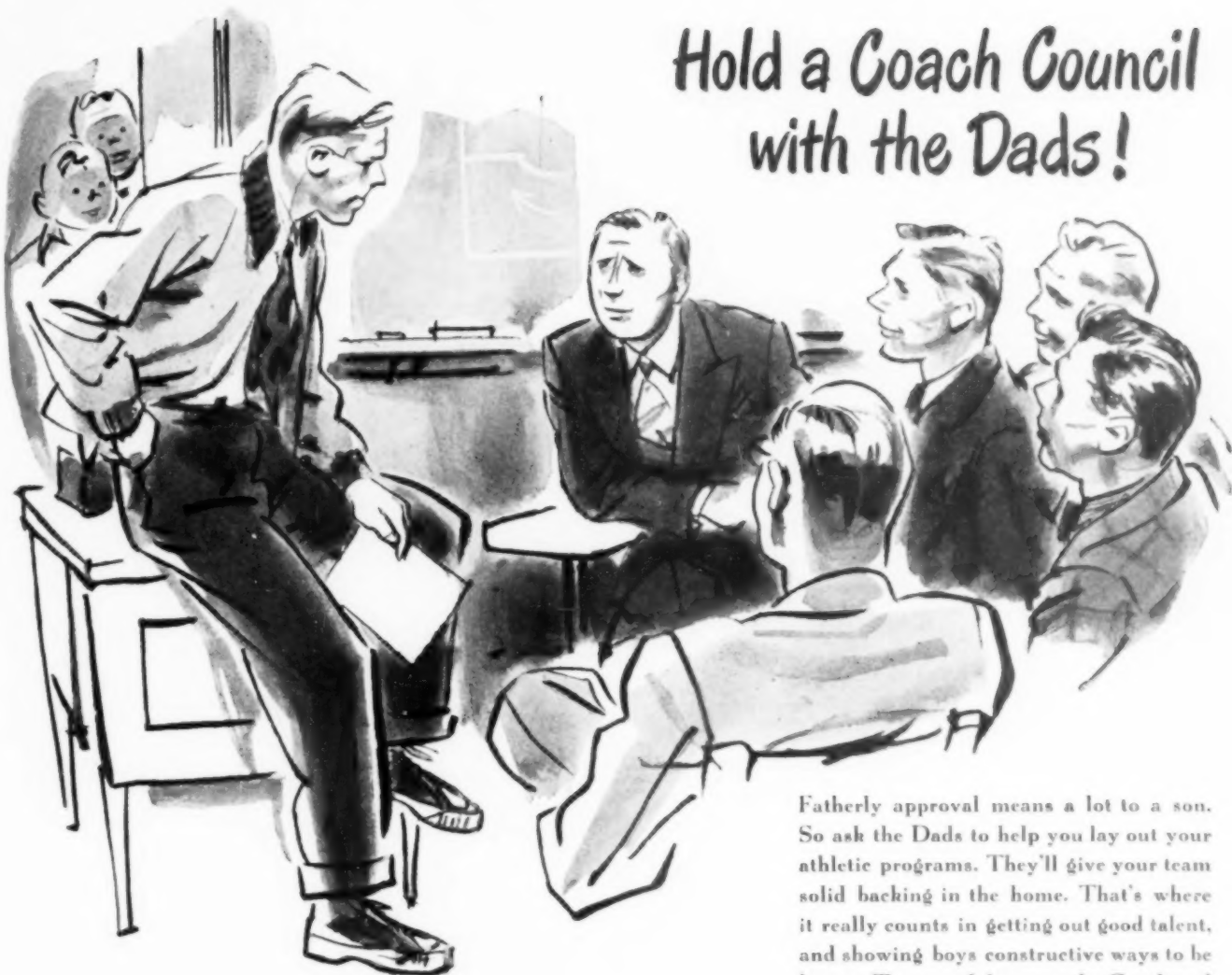
The Sturgis triumph in the "A" tournament, long dominated by the

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powerful teams of the Eastern conference, was all the more remarkable because the new champions waded through the toughest possible draw.

The Scoopers opened with a 41-39 victory over Madison, then tackled the highly-favored Brookings team in the semi-finals. Brookings, the defending state champion as well as the Eastern conference title-holder, had a veteran team that included four of its 1946 regulars. But Sturgis took command in the first two minutes and won, 49-40, with a brilliant all-around performance.

Short on reserve strength and showing signs of wearying, the underdog Scoopers then moved into the finals against Sioux Falls, Eastern conference runner-up. Sturgis ran up a 27-13 lead at the half, then stood off Warrior rallies to win by three points. The five Sturgis regulars played practically the entire tournament, only two others seeing action of any kind.

Coach B. W. Woodle added to the drama of the triumph by leaving a sick-bed and flying to Sioux Falls to direct his team against Brookings, after listening to radio reports of the victory over Madison. The conquest of the Bobcats was better than any doctor's prescription and he was in top shape for the remainder of the tournament.

No one figured Webster as a serious contender in the B affair until the Bearcats suddenly blossomed into a winning team late in January. Led by center Harvey Hanson, only hold-over regular, the Bearcats had to beat two previously undefeated teams.

They met a great Platte team, winner of 26 in a row, in the first round and won, 44-42, on a last-second basket by Hanson. Webster trimmed Deadwood, 51-28, in the semi-finals, then tackled Eureka, winner of 31 in a row, in the championship game. The Bearcats trailed by 14-8 at the half, but swept to a 33-25 victory in the second half.

Eureka's winning streak of 31 is believed to be the longest in the state's history, superseding the 30-game skein made by Arlington, 1938 B champion.



Big, fast, rugged Hillhouse of New Haven, champions of all Connecticut.

The two tournaments wound up a season that saw 280 schools vie for honors. The B tournament, played in Aberdeen's Civic Arena, drew a gate of \$14,562.10 for a new all-time high. Hundreds were turned away. Largest crowd was 5,365 for the championship session, representing the absolute capacity of the building.

Receipts for the A tournament, played in the Sioux Falls Coliseum, were \$12,314.75, which also represented capacity crowds with hundreds turned away. Largest Coliseum crowd was estimated at 5,000.

—LARRY DESAUTELS

## MICHIGAN

### Record crowds

**A**PPROXIMATELY 275,000 people attended the Lower Peninsula and Upper Peninsula tournaments, with 6,000 present at the U.P. finals

and a record-breaking 12,418 on hand for the L.P. wind-up.

Three of the four Upper Peninsula finals were decided by one point. Bessemer nosed out Lake Linden in Class B, 46-45. Norway beat Gwinn, 55-54, for its second straight C title. Mass defeated Vulcan, 63-48, in Class D, and Bergland triumphed over Perkins, 40-39, for the E crown.

In the Lower Peninsula finals, Flint-Northern captured its fifth state Class A championship by beating Dearborn, 38-28. Alma became the New B champion by winning from Fremont, 32-20. Saginaw-SS. Peter & Paul defeated Evart, 38-29, for the C title, while Baroda turned back Haslett, 41-32, for the D crown.

Interest in high school basketball reached a peak this season, as evidenced by the record-breaking crowds and by the large number of participating schools.

In general the fast break continued to dominate play. Liberal use was made of the substitution rule. But it was significant to note that despite the change in the timing rule for the last four minutes of play, the tourney games were completed on the same schedule as in the past (one hour twenty minutes).

—CHARLES E. FORSYTHE

## FLORIDA

### Sunshine after 23 years drought

**T**HE 1947 tournament was the largest and most successful ever held in the state, attracting a record attendance of 22,000.

Chief reason for this boom was the transfer of the tournament to the new Fort Homer W. Hesterly Armory in Tampa, which has a seating capacity of 5,500. The Armory became available for high schools on January 1 after being released by the Army. This enabled basketball fans from all over the state to get seats at the tournament, heretofore almost impossible.

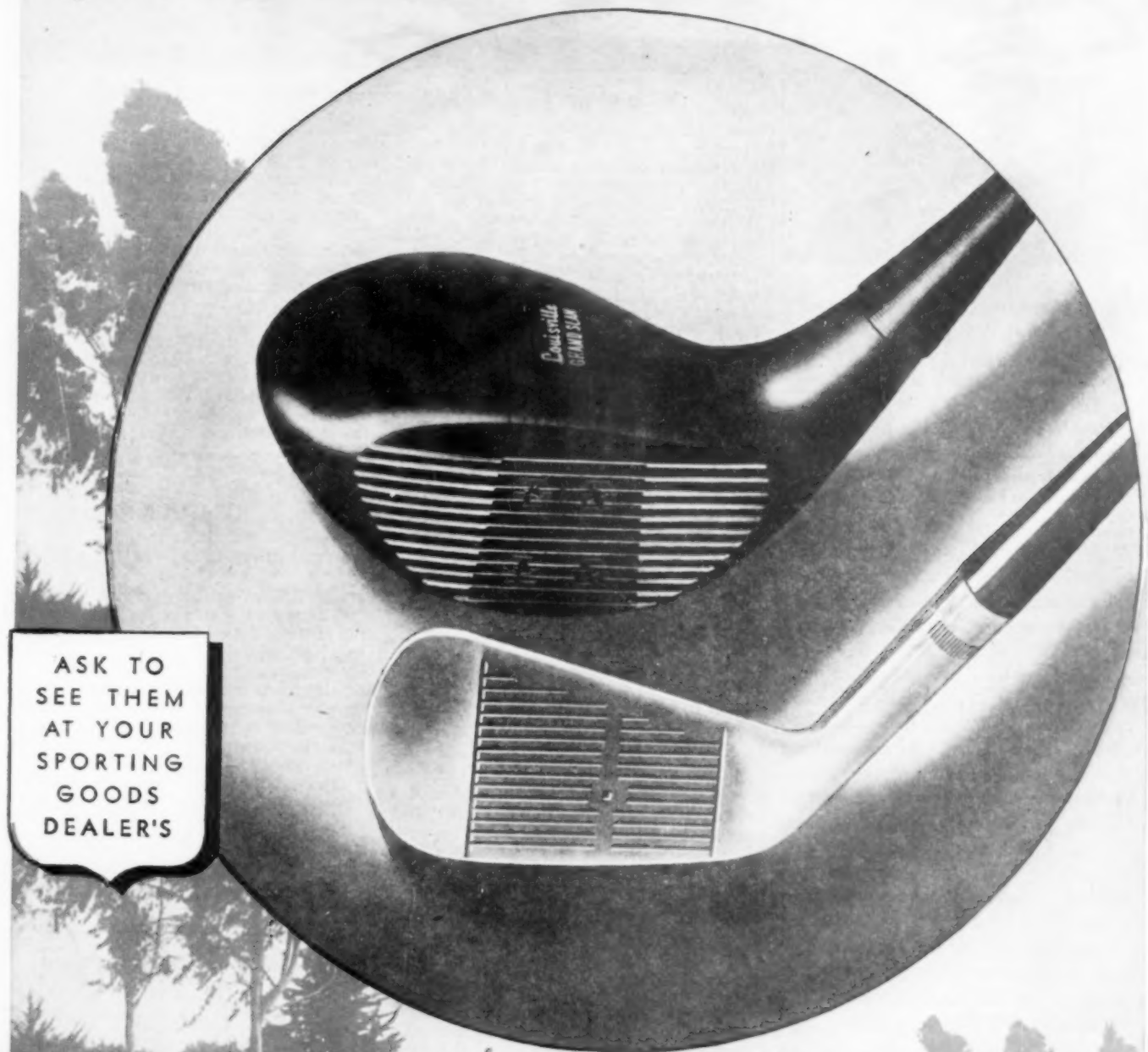
The seeded teams were Ft. Lauderdale 1; Hillsborough of Tampa 2; Pensacola 3; and Orlando 4. The tourna-



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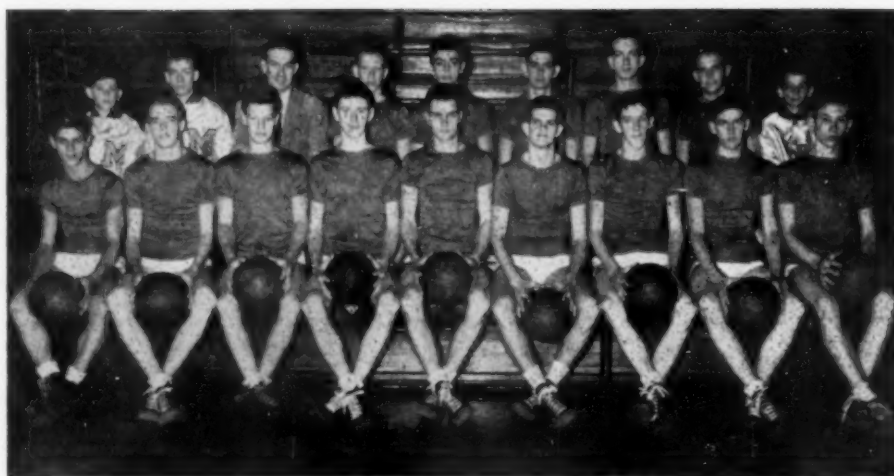
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Pride of the Adolph-Rupp territory, Maysville of Kentucky.

ment provided the usual thrills with 4th-seeded Orlando being eliminated in the opening round by Plant of Tampa. Third-seeded Pensacola fell by the wayside in the quarter finals, being defeated by Miami Beach, the defending champions.

However, the seedings ran true to form for Ft. Lauderdale and Hillsborough, which defeated their semifinal opponents, Plant and Miami Beach, to enter the finals.

Ft. Lauderdale led the first three quarters, but never by more than six points. On the first play of the last quarter, Hillsborough tied the score; and from there on could not be denied. They went on to score 19 points in the final quarter, winning the state championship, 37-26. It was Hillsborough's first state title in 23 years.

—HAROLD MOSSEY

## IOWA

### First four-time champ

IN annexing the 1947 championship, Davenport became the first team in history to cop the state crown four times. Entering the series after a mediocre season, the Blue Devils hit their true stride and played like champions all the way.

Led by Fred Ruck, great all-round 6-2 center, the river city boys knocked off Diagonal and Alton, two B schools, by top-heavy scores; then eked out a close win over powerful Ottumwa. After trailing for 31 minutes, Davenport won out in the last 31 seconds, 31-30, when Ruck dropped two charity tosses.

Meanwhile in the other bracket, little Danbury, the crowd favorite, was making a strong bid for the title. The only unbeaten team in the field of 16, Danbury knocked off Atlantic in the first round, then toppled Dowling of Des Moines to gain the semis. There, with some 30-odd straight victories behind them, they fell before a fine Sioux City (Central) outfit.

The final night of the tourney saw Davenport running away from Sioux City, 42-23, and Danbury nosing out Ottumwa, 28-37, for third place.

The caliber of play was mighty impressive. Davenport was particularly interesting to watch. They could work either deliberately or race at top speed. On defense they used an aggressive zone which gave the opponents few good scoring chances. Ruck,

the big center, was the work-horse under both hoops.

Danbury's five starters played the entire series without a substitution and displayed a fine brand of ball. They used the slowest offense in the tournament, and did a splendid job of ball-control. In Dick Riecks, they had the outstanding dribbler and scorer of the tourney.

All in all, the 1947 tourney was one of the finest in history. The interest was tremendous, as indicated by the opening-day crowd of over 30,000 (three sessions). The largest single-session crowd, over 15,000, attended the semi-finals.

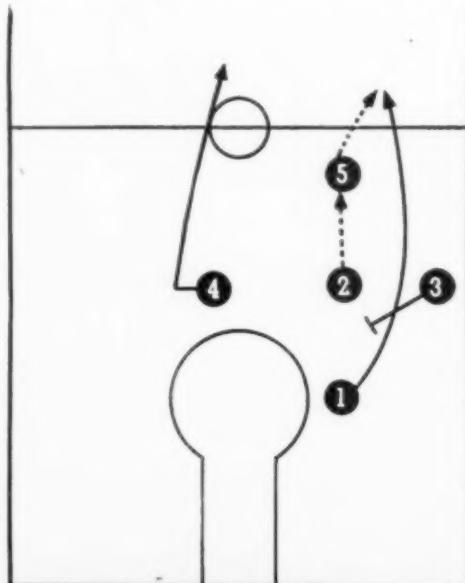
—FRANK S. O'CONNOR

## KENTUCKY

### No foul play

OFTEN a contender but never a champion, Maysville journeyed to the state tourney this year determined to crash the winner's circle. Coached by Earle Jones, a coach with a record of eight unsuccessful trips to the state meet, Maysville displayed a well-tutored, scrappy squad which picked up momentum as the tournament progressed.

Owensboro and Brewers shared the pre-tourney favorite roles, with Cor-



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Deep in the heart of Texas, El Paso's "plane" joes rule the roost.

bin, Central City, and Valley—teams which had lost three or less games during the season—also having strong backing.

It was Brewers, a small western Kentucky school, that came through in strong style. But Maysville refused to be denied. In a well-played, cleanly fought battle, Maysville nosed out Brewers, 54-40.

The tournament was characterized by capacity attendance, good teams, clean play, and a diversified draw. One of the more surprising twists, from a technical standpoint, was the absence of a 100% zone defense team.

The trend in shooting was definitely one-handed, with 31% of the one-handed shots being successful as compared to 22% with two hands. Another interesting statistic revealed that 99% of the fouls were called on the defense. Only 14 fouls were called on the offense during the entire 16 games, and only 20 boys fouled out. The average total score was 90.9 points.

The jump ball play in the accompanying diagram was used quite successfully. The jumper, 2, tapped to 5, as 3 screened off XI, allowing 1 to cut around for the pass from 5. No. 4 cut down the other side, creating a 3-on-1 or 3-on-2 situation.

Credit for the most successfully managed tournament in the 30 years history of the event is due Ted Sanford, secretary of the high school athletic association.

—BRUCE DANIEL

## NEW JERSEY

### Joy in Newark

**N**EWARK Central, coached by Hank Finck, captured its first Group IV championship by edging out Union Hill of Union City, 40-37.

Led by all-state center, LeRoy Smith, Newark Central staged an uphill battle in the rough, hard-fought finale. Beaten by Weequahic in the City League and an early victim in the Essex County tourney, Central became the first Newark high school to win a state basketball title.

Central eliminated Perth Amboy's "dark horse" entry in the semi-finals,

49-42, while Union Hill tripped Trenton High, 32-26.

Englewood, led by Sherman White, came through to win the Group III diadem by downing Springfield Regional, 49-22. The win was the 25th in a row for the unbeaten Englewood quintet. White, 6-5 center, created a new tournament record by scoring 129 points in five games.

Merchantville provided the upset of the tourney—if not of the year—in defeating Weehawken's highly-touted scoring machine, 44-39, for the Group II championship. Jim Wiggins and George Dempsey set up plays and shot from all angles to give Coach Bob Elder's Merchants their first state title.

Fort Lee stopped Dunnellen, 39-34, in the Group I titular contest. Two field goals and a foul by Jack Fuchs clinched the issue in the final period.

To Trenton Catholic went the Group A Catholic Schools' championship. The Golden Wave upset Seton Hall High, 55-47.

St. Joseph's of West New York nipped St. Mary's of Perth Amboy, 47-43, to walk off with the Group B parochial crown.

In a thrilling overtime game—the

only one of the tournament—St. Patrick's of Elizabeth defeated St. Rose of Belmar, 48-44, for the Group C title. Fifty-one fouls in all were called.

The tournament found 128 public and parochial high schools vying for top honors in seven groups. More than 14,500 fans attended the finals in the spacious Elizabeth Armory.

When Trenton High School dropped out in the Group IV semi-finals, it brought to a close the colorful coaching career of the Trenton mentor, LeRoy (Red) Smith. After 31 years in the game, "Red" is retiring to become director of health and physical education in the Trenton public school system.

During his 31-year span, Smith's teams played 709 games, winning 541 and losing 168 for a .763 mark.

Undefeated Englewood ran up the tourney high score in thumping Audubon, South Jersey champions, 86-18, in the Group III semi-final. Highland Park's Ballou won individual-game scoring honors with 32 points against Weehawken.

—CHARLES R. LEWIS

## TEXAS

### Winners up in the air

**R**ECORDS for attendance, individual points, team points in a single game, and for stations carrying the broadcasts, all fell by the wayside in the 27th annual state finals.

Over 7,000 fans packed Gregory Gym on the final night to see the championship AA game between "high-flying" El Paso and Thomas Jefferson (San Antonio). El Paso made the trip to Austin and back by plane—the first air trip for a tournament team. The wild blue yonder must have agreed with the boys, for they whipped Jefferson, 27-22.

Amarillo defeated Greenville in the semi-finals despite the scoring record set by the losers' 6-10 Marcus Freiberger, who dunked 46 of his team's 53 points. Amarillo's 77 points also constituted a new tournament record.

East Mountain (Gilmer) copped the A crown by beating Bowie, 35-22, while Johnson City annexed the B



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title by nosing out a fine Marfa team, 16-14, in the final 10 seconds of play.

All the winning teams boasted several tall rebound retrievers and one or two small speed merchants to work the ball up the court.

The three championship games, as well as the presentation of the winning awards, were broadcast over a statewide network of 32 stations. These broadcasts have been a big factor in creating statewide interest in schoolboy basketball.

Texas high schools are developing fine basketball teams, and the public is showing its appreciation by turning out in record numbers. The attendance at the three-day tournament hit 37,000—an all-time high. All in all, 1,088 teams and 17,723 boys played basketball in Texas this year.

—R. J. KIDD

## INDIANA

### Shelbyville blitz wins

**A**FTER four weeks of tournament play, involving 787 teams, Garfield, proud possessors of a 30-game winning streak, and powerhouse Shelbyville squared off for the coveted Hoosier State diadem before a sell-out crowd of 15,000.

Each team played cautious ball for a quarter, with Shelbyville jumping into a three-point lead. The game then picked up tremendous pace. But Shelbyville was never overtaken. The final score was Shelbyville 68, Garfield 58.

Eleven new records were established: Most points by both teams in the final game—4 points per minute. Most points scored by opponents in last four games—Shelbyville, 180. Most field goals in final game—Shelbyville, 30. Most personal fouls in final game—Shelbyville, 20. Most points by one player in last four games—Garrett, Shelbyville, 91. Most free-throw attempts by one player in final game—Lovellette, Garfield, 13. Most free throws missed in final game—Lovellette, 6. Most free throws in last four games—Shelbyville, 54. Most free throws in championship game—Garfield, 20. Most points by winner in final game—Shelbyville, 68. Most points by loser in final game—Garfield, 58.

The champions played a man-to-man defense, shifting only when tightly screened. The defensive re-

bounding of Shelbyville's Garrett and Breck cannot be praised too highly. Time and again they limited Garfield to its initial shot.

Shelbyville, after moving into the offensive end of the court, employed two types of attack. First—three out and two in. From this set-up, they worked a series of screens, allowing one man to come through the free-throw lane for a lay-up shot. Second—two out and three in, with their sensational center, Bill Garrett, playing the pivot.

The pivot was used extensively, with the forwards weaving in and out around the pivot man. The offensive rebounding power of Garrett and Breck was outstanding. Whenever the defense dropped back, the accurate shooting of Johnson, the Shelbyville guard, brought them out again.

Two better matched teams have seldom been seen. Both were fundamentally sound in every department: shooting, passing, footwork, ball-handling, and basketball knowledge. Each team was alert and capitalized on the other's mistakes. The outcome of the game was in doubt until the final gun. Thus, from a spectator's viewpoint, it was the finest tournament in years.

—JAY MCCREARY

## ILLINOIS

### Vive la Paris!

**T**O the cosmopolite, the artist, and the ex-G.I., *The Last Time I Saw Paris* invokes nostalgic memories of the boulevards and bistros of the French capital. But to the 7,500 basketball fans lucky enough to witness the 1947 Illinois finals, the last time any one saw Paris it had just upset Champaign to win the 40th annual state championship.

Paris won on the strength of five well-coached, physically superb seniors who played such intensive basketball that in none of the four final games were they strongly pressed or was the eventual outcome seriously in doubt.

The shooting of the new champions was torrid. Captain Bob Owens, lanky center; Don Glover, Dow Morris, Glen Viotor, and John Wilson all contributed to a spectacular team average of .355.

In the final game against Cham-

paign, they hit 22 times in 52 attempts for a .423 percentage. In the third quarter, they "canned" 9 field goals in 12 attempts. At the bread line, they made good in 14 out of 17 attempts. That kind of shooting cannot be denied.

It was the second state title for Paris. In 1943, another Eveland-coached club nosed out Moline for the championship. Over a 12-year period, Paris has entered the state finals eight times. Who would have the temerity even to suggest that Paris is not the basketball capital?

The Paris victory was not entirely unexpected. During the regular season, the Tigers had won 36 while losing only 2—to Waukegan and Danville. To win the coveted diadem, the Tigers ripped Beardstown, 70-33; South Shore of Chicago, 49-37; Pinckneyville, 57-50; then frustrated Champaign's bid for a second straight state title—a feat which hasn't been accomplished since Elgin made the grade in 1924-25—58-37.

—M. F. SPRUNGER

## ALABAMA

### Campbells are coming—but slowly!

**A**STUTE students of basketball who appreciate precision, form, and speed, would have derived a lot of pleasure watching Parrish High of Selma win the 1945 and 1946 state titles. The Selma lads, unbeaten in 88 games, had everything.

But had the same students returned to the 1947 tournament, they would have departed highly disillusioned. For Phil Campbell won the crown without anything akin to the aforementioned qualities.

What the Campbells did have—long, springy legs, long arms, a fair shooting average, and a very deliberate style of play—was sufficient unto the end. They didn't work a single setup in the four victories necessary for the title. They merely kept control of the ball three-fourths of the time, shot often, though never hurriedly, and threw up a better than average defense.

Said Floyd Burdette, University of Alabama coach who watched the entire tournament: "I never saw a high school team play so deliberately and with so much care. Yet they had no



The last time anyone saw Paris they were Illini champs.

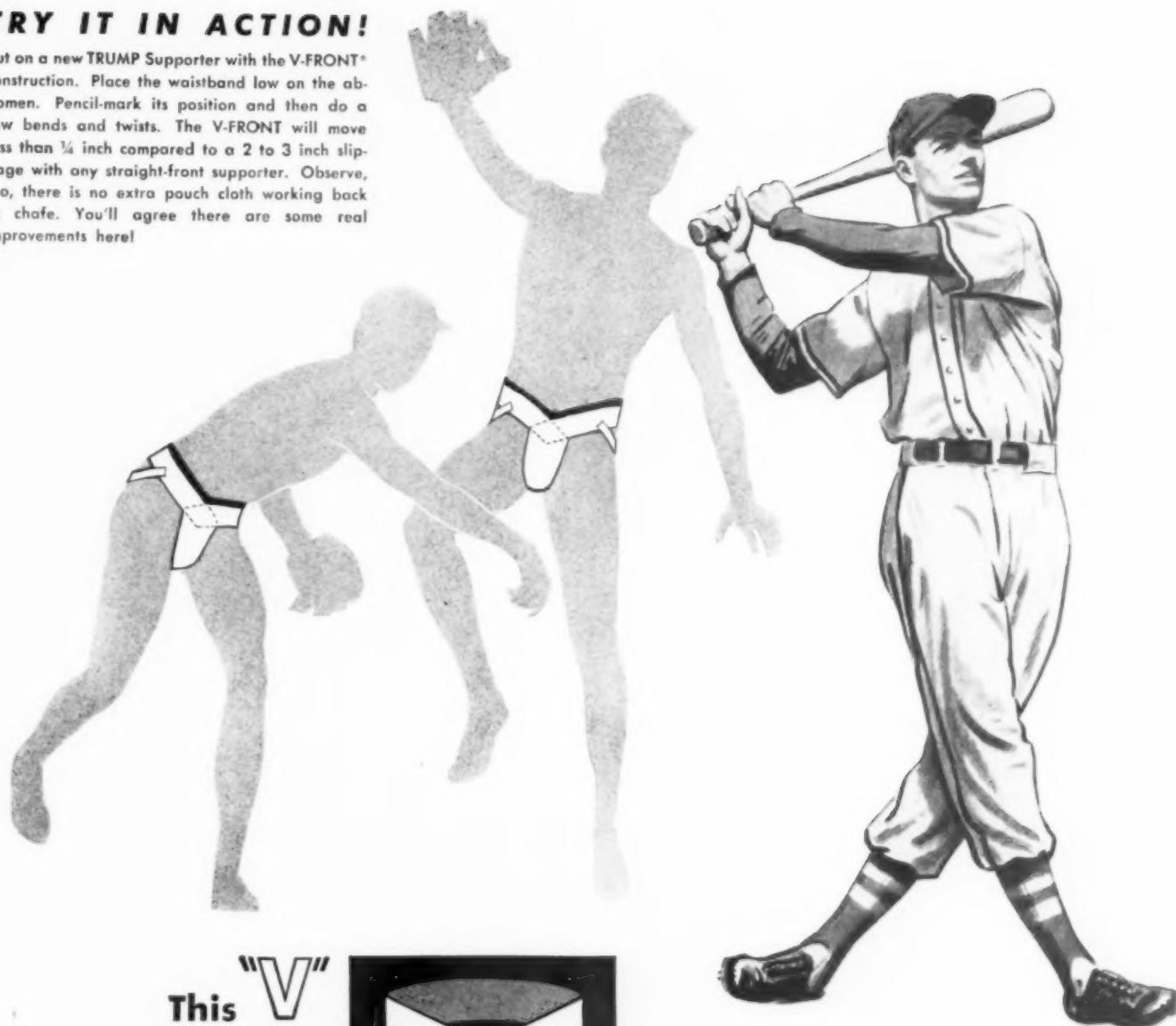


Alabama's all-state five; pipe the little guy.

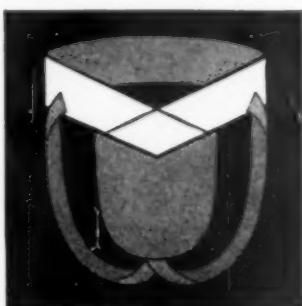


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plays and it was unusual for one of them to work up a sweat."

Phil Campbell beat Scottsboro, three-times champion, in the final, 23-21, in a superb defensive battle. Earlier, the Campbells had disposed of Etowah County High, 36-28; Sidney Lanier (Montgomery), 29-26; and Murphy (Mobile), 34-24.

Jimmy Sinclair, talented Murphy center, was high scorer for the tournament with 71 points, 27 of them in one game. James Ray, Hamilton center, notched 28 as the top one-game effort.

Scottsboro's 5-3 guard, "Red" Thomas, was voted the meet's most valuable player. The 16-year-old youngster was a brilliant ball-hawk and a high-pointer, ranking fifth among the scorers. His jumping overhead shots seldom missed and the spectators were completely won over by the youngster, especially after he was forced out twice with bad cuts about the eyes.

Attendance for the five sessions of the two-day meet was 10,000, an all-time high. Some 4,000 fans watched the semi-finals and that many more came back for the championship game.

—WENDELL GIVENS

**SOUTH CAROLINA**

**Olympia takes A title**

THE state finals brought together the champions of the upper and lower parts of the state. In a playoff marked by fine sportsmanship, clean play, and able officiating, three new champions were crowned.

Olympia won the A diadem with a 42-28 victory over North Charleston; Bennettsville took the measure of University High, 48-39, to annex the B title; while Kelly-Pinckney took C honors with a 27-21 decision over Holly Hill.

H. G. McGraw, of Clemson, and H. B. Betchman, of Summerton, chairman respectively of the boys and girls tournaments, did a magnificent job of promoting and administering the operational details.

—C. M. LOCKWOOD

**OKLAHOMA**

**Slow break does it**

MUSKOGEE'S Roughers, beaten in the finals two years running, laid a ball-control trap for the favored Capital Hill five of Oklahoma City and waltzed off with the Class A title, 25-23, before 5,500 mildly hysterical fans.

Co-winners of the Oklahoma Six conference title, Muskogee came to the state meet flue-ridden. In their first-round game against Shawnee (34-29), Coach John Grayson ordered his boys to stall as much as possible in order to rest themselves.

After grabbing a good-sized lead in the first period, the Roughers played keep-away for most of the remainder of the game. It was much the same in the semi-finals against Pawhuska's little hustlers (37-35).

Everyone expected Muskogee to take it slow in the finals. But Grayson overnight converted to fast break, and whizzed his team into a 19-14 lead.

With three minutes of the half remaining, Grayson ordered a stall. His boys took possession, began passing around, and Capital Hill sat back and waited. Finally a set-up play materialized. Although the shot was missed, Muskogee converted the tip-in. That made it 21-14 at the half.

It was the same story in the last half. Grayson's boys took only five shots the whole half.

Capital Hill let Muskogee control the ball until only five minutes remained. Then they started to make



These boys have a right to hold hands—they just won the Oklahoma title.

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RANK	CONVERSE-DUNKEL RATING	RANK	CONVERSE-DUNKEL RATING
1. UTAH	80.4	6. NOTRE DAME	72.0
2. KENTUCKY	79.3	7. U.S. NAVAL ACAD.	71.6
3. HOLY CROSS	75.9	8. LONG ISLAND	71.5
4. OKLAHOMA	72.2	9. INDIANA	71.4
5. WISCONSIN	72.1	10. TEXAS	71.4

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Beaumont-St. Louis (won 29, lost 1), Missouri's first four-time winner.

up for lost time. They almost knotted the score, but, overanxious, fouled six times and Muskogee consumed more time taking the ball out of bounds.

The six men who played for Muskogee, none of whom were starters the previous year, grew tired even with the decelerated pace. But they made the victory good, giving both their coach and their school their first state crown.

Grayson, a member of the U. of Oklahoma "Boy Scouts" of 1938, now has won 207 games and lost 33 in eight years of coaching, finishing 1947 with five losses in 29 tries.

In Class B, Byng topped Purcell, 40-30, while in Class C, Burbank bested Boynton, 39-38, in an overtime period. Bill Koller coached the Byng five, which downed several Class A teams during the season, while Grover Bradley handled the Burbank champions.

—LAYMOND CRUMP

### MISSOURI

#### Records fall like rain

**S**TARTING with the number of schools competing, 518, as compared to 466 last year, the 21st annual tournament was a record setter right down to the last game. The total attendance of 13,913 and the \$12,603 gate broke the previous mark of about 9,500 and \$9,500 set last year.

Beaumont of St. Louis gained its fourth title, another record, with a 59-42 win over Versailles.

An individual mark was set by Bud Heineman of Versailles, when he dropped 32 points in the semifinal against Normandy. The old mark, 31, was made by Del Scroggins, Pleasant Hope, in 1929. Heineman also scored the most points during the tournament—96. The old record was 87 by Gene Ruble of Lebanon in 1943.

Beaumont succeeded another metropolitan team, St. Louis U. High, to the championship. It won 25 games in a row before losing to Normandy, a suburb of St. Louis, 37-26, in the regional final. The champions then closed out their season with four triumphs in the state series to finish with a 29-1 record.

The 16-team field was evenly distributed between "A"-sized and "B"-sized teams—a distinction which was dropped after the 1942 event when

the series was changed from two eight-team tournaments to one 16-team affair.

However, the schools with small enrollments have not been hopelessly outclassed. They have won two of the last five tournaments—Bismarck in 1944 and Conway in 1945. Beaumont captured the title in 1933, 1942, 1943, and again in '47.

There was a noticeable lack of zone defenses in the 1947 tournament. Some schools alternated their fast breaks with set plays, depending upon the type of opposition. Single and double posts, of course, were the rule. But nothing spectacular showed up in the way of offenses.

—HAROLD TUTHILL

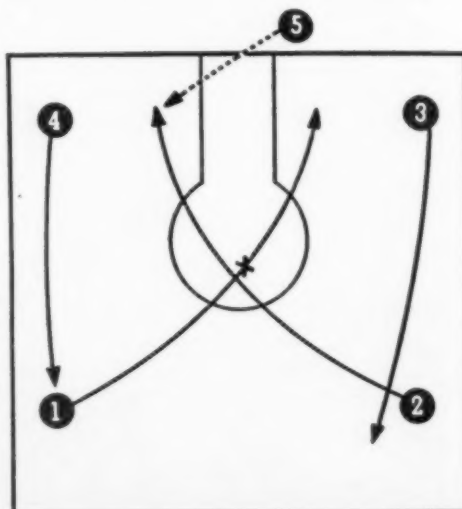
### NEVADA

#### Free eats!

**T**HANKS to increased seating facilities, the state tournament continues to boom. People will pay to see good basketball even if local teams are not involved.

The 1947 tournament was marked by fine play, fine sportsmanship, and fine officiating. Neutral officials were brought in from San Francisco and did a great deal to keep the games free of untoward incidents.

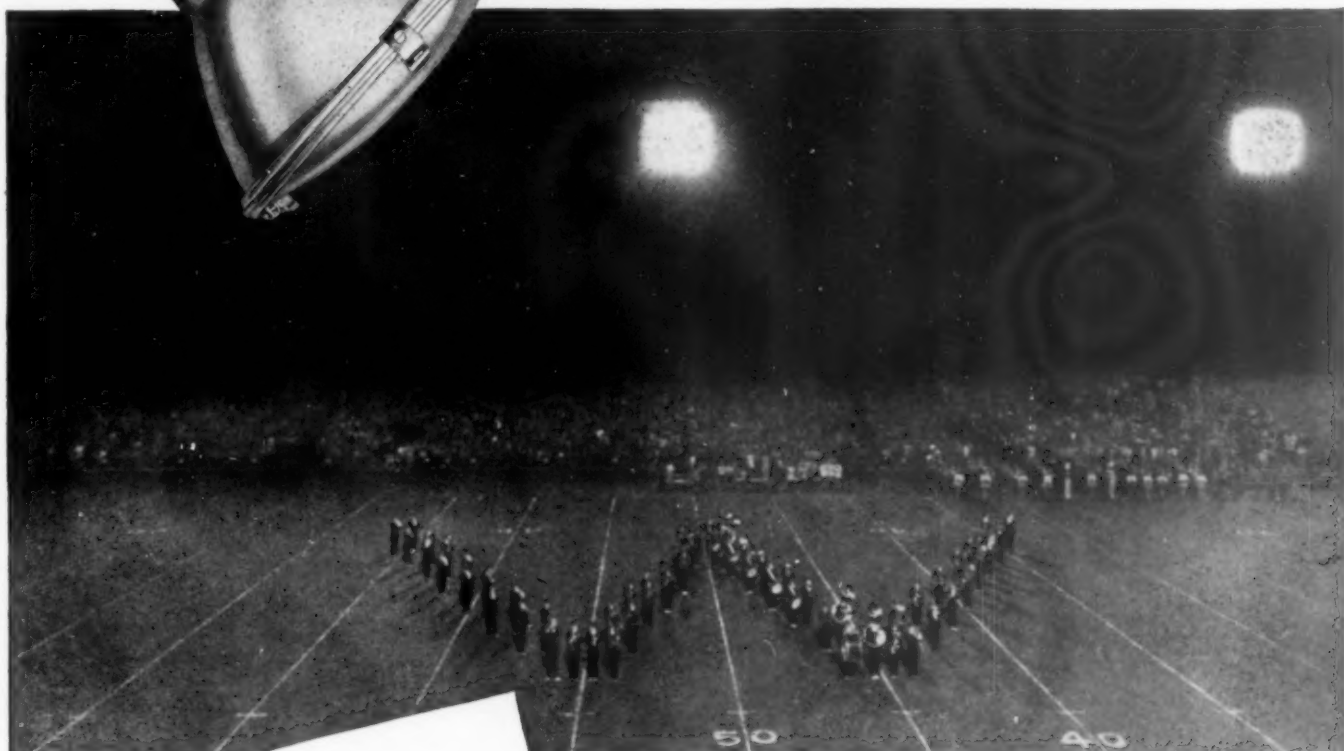
Basic High (Henderson) copped the A title with a 41-31 defeat of White Pine (Ely), while Wells ran off with



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the B crown by trimming Carlin, 34-25.

Basic used two defenses. After employing a zone throughout the tournament, they sprang a pressing man-to-man against White Pine in the finals.

Both winners used quick-break offenses. Coach E. M. McDaniel of Basic used the accompanying out-of-bounds play with great effect. He outlines it as follows:

"The play demands perfect timing, with No. 2 the key man. Nos. 3 and 4 take their guards away, while 1 and 2 criss-cross down the middle. No. 1 reaches the key a moment before 2. He hesitates briefly to screen off 2's man, then continues on. Either 1 or 2 gets the pass-out. If the play fails, the ball may be whipped out to 3 or 4."

The University of Nevada officials were most cooperative in making the coaches and boys feel at home, and served refreshments throughout the tourney at University expense.

—NEIL P. SCOTT

## COLORADO

### Sing a song of six-footers

**S**PARKED by 6-8 Charles Darling and Myron Craig, a speedy forward who could hit from anywhere, South Denver captured the state's first AA championship with a neat 45-36 triumph over Boulder.

In Class A, Durango edged out a fine Rocky Ford team, 36-34, while Springfield defeated Stratton, 33-32, for the B crown.

Though there were many upsets in the tournament, the caliber of play was on par with that of other years. One of the more interesting developments of the season was the influx of rangy centers. Four of the six finalists featured skyscrapers in the pivot position.

Besides the rangy Darling, there were Boulder's 6-8 Jerry Simon and Durango's 6-9 Jerry Morgan.

No unusual trend was noted in the way of defenses and offenses. The teams used zone, man-to-man, and combination defenses. The offenses varied from the single-post with two-out to the double-post with three-out, with many fast breaks thrown in for good measure.

Spectator interest hit a new high with the spacious auditorium sold out completely on each of the three nights of the tourney. In all, 30,000 fans witnessed the games.

—RAY PATTERSON

## VIRGINIA

### Height spells might

**E**MPLYING a fast break offense and capitalizing on superior height, Granby of Norfolk captured the state Group I title from George Washington of Alexandria, 58-33, before a crowd of 2,500.

The Granby Comets jumped into a lead in the first minute of play and were never headed, piling the score up to 29-11 by the half. The Presidents, defending champions, handled the ball superbly, but were plagued by faulty shooting and lack of height.

The rangier Norfolk team, constantly claiming the rebounds off both



boards, used follow-up and short set shots to dominate the scoring. While Washington rallied against the Granby subs in the second half, they were no match for the regulars when they returned.

Louis McLeod, Granby center, copped individual scoring honors with 20 points. A constant menace to Washington under the hoop, McLeod scored all his points on field goals. Bobby Brown paced the losers with 14 points, 6 of which were garnered from the charity line.

Granby's win brought the state title back to Norfolk for the first time in 20 years.

## THE NATION'S BEST

**A**S a finishing touch to the state tournament round-up, we'd like to give you our idea of the ten schoolboy quintets which rated tops for 1946-47.

Our list isn't official, of course. All we did was pick the ten Class A (or AA) state champions which compiled the best won-lost records over the season. And here they are:

High School	Won	Lost
Cheyenne (Wyo.)	28	0
Grand Island (Neb.)	23	0
Wilmington (N. C.)	15	0
Belmont (Miss.)	35	1
Beaumont (St. Louis, Mo.)	29	1
Granby (Norfolk, Va.)	22	1
Soddy-Daisy (Tenn.)	44	2
Paris (Ill.)	40	2
El Paso (Tex.)	19	1
So. Denver (Colo.)	17	1

As you can see, only three A clubs managed to stay unbeaten. Last year, six teams turned the trick.

Although Cheyenne High turned in the best record (28-0) and Soddy-Daisy won the most games (44), we believe the laurel wreath for outstanding achievement must go to Allentown High and Hillhouse of New Haven (Conn.).

Both these clubs, coached by J. Birney Crum and Sam Bender, respectively, hung up their third straight state crowns this season!

Middletown (Ohio) and Savannah (Ga.) merit honorable mention for winning two state championships in a row.

Our Class B returns, unfortunately, were not as complete as our Class A records. Judging by the available information, however, it would seem that Englewood (N. J.), with a spotless 25-0 record, was the nation's No. 1 B team.

Other outstanding B clubs were: Irwin (Pa.), 30-1; Columbiana (Ohio), 25-1; Norton (Va.), 22-1; and Buhler (Kan.), 17-1.

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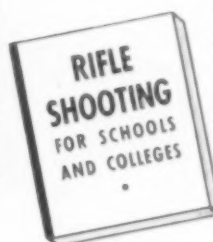
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# Are You Old Fashioned, Too?

ALTHOUGH I have been coaching only a few short years, I find that I am old-fashioned in my methods. This fact was brought to my attention some time ago via the newspaper, magazine and radio. But the situation has become so intense that I have taken pen in hand to defend myself and other coaches who, I hope, are like me in some ways.

My downfall lies in the fact that I am a believer in good old pep talks before, during, and after any and all athletic events.

Although the sport of checkers is not on our list of interscholastic activities, I am prone to believe that if it were, I would feel the urge to inject a little fire into those participants representing our colors.

I firmly believe that the locker-room pep talk has a place in the lives of high school athletes. Through this source of communication, our youth can be taught many good things which will carry far and beyond any information derived elsewhere.

In these locker room sessions, lasting only a few minutes, emotion and spirit can and should be aroused, not by derision and heckling, but by a united effort on the part of team and coach.

No team fulfills a given schedule for the schedule's sake alone, but also for the opportunity of competing earnestly as a representative of schoolmates, faculty, parents, and the town of which it is part. Boys need frequent reminders of this because the pleasant taste of success and publicity can often dull desirable attitudes.

Don't get me wrong. I do not say do away with the clarification of techniques, play situations, and incisive action. This definitely must be part of the locker room procedure. But in itself it does not suffice. A combination of *what* to do and *how* to do it with the *spirit* with which to do it, is the ultimate goal.

Now, Coach, I should like to ask you a few personal questions:

1. Do you persist in deriding boys for previous mistakes?

2. Do you allow the mistakes of a player to overshadow the good work done by the same boy? I'll

Robert M. Allen, coach at University High School, Urbana, Ill., defends the old-fashioned pep talk!

bet even you were guilty of errors when you were a teen-age athlete.

3. If the above questions hit the spot, have you ever tried words of encouragement instead of discouragement?

4. Are you guilty of abusive language, or do you want your boys to pattern their vocabularies after yours?

5. Do you constantly disagree with officials' decisions in front of your players? Do you hire the most competent officials possible? Do you allow your home crowds to hinder the officials, or do you encourage their sportsmanship?

6. Do you neglect your reserves at half-time? After all, they work all week, too.

7. Are you willing to sacrifice the game for the health of an injured player?

8. When succumbing to the l.r.d.'s (locker room deliriums), do you think of yourself or of your boys?

9. Does the pronoun "I" enter your conversations often?

10. Do you allow your players to leave the locker room with a "down" instead of "up" feeling?

These questions were not difficult to conceive because all of us are constantly facing them.

The rewards of spirit injection are fruitful.

To see the reserve halfback smash into the large opponent with all his 120 pounds gives pleasure.

To see the mediocre miler strain to garner a third place quickens the pulse.

To see the inexperienced sophomore block a sure shot in the closing seconds brings out the smiles.

Courage and spirit can be stimulated. A born competitor is a god-send, but it is part of our job to instill in those less fortunate athletes that aspect of competition that lies not in the muscle and brain, but in the heart.

Long live the old-fashioned coaches who still believe that athletes can be stimulated to develop courage and spirit!



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# Coaches' Corner

Please send all contributions to this column to Scholastic Coach, Coaches' Corner Dept., 220 East 42 St., New York 17, N. Y.

While strictly from hunger with a bat in his hands, Hughey Critz, the great little second baseman of a decade ago, could always belt the high hard one. One day at Ebbets Field, Dazzy Vance suddenly began wrinkling them for Critz. Hughey almost went down on his knees cutting at a low curve. He topped the ball between first and the mound. As Dazzy charged the ball, Hughey lit out for first.

Dazzy tripped and fell flat on his face, throwing the ball from the ground. The throw pulled the first baseman out of position. He crashed into Critz and there you had it—Vance, Critz, and the first baseman lying in a welter of blood, sweat and loosened teeth. After play was resumed, Critz shouted to Vance: "Put that nickel curve in your pocket before someone gets killed!"

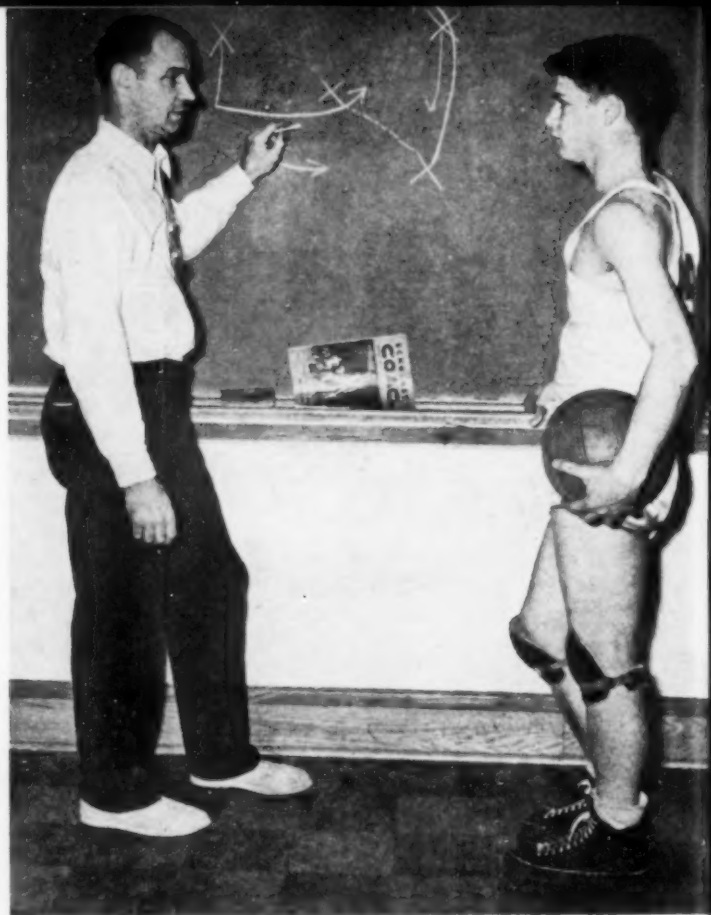
**Wagner to Bach to Beethoven—** what a classic combination. And they're playing for the Yankees this year! For the benefit of you late tuners-in, the New York club is sponsoring a program of classical music every afternoon. Known as *Symphonic Matinee*, the program runs 55 minutes and will continue through the 26-week season. Only classical music is offered—no boogie-woogie and no crass plugs to go out and see the Yankees (they're so round, so firm, so fully packed).

The program, while very couth, is bound to bewilder the mass of fans who remember Wagner as a squat, bow-legged Dutchman who used to do a helluva lot of shortstopping for the old Pirates.

"What do you mean, blaming the elimination of the center jump for the doubling of scoring in basketball?" writes John F. Lambert, of the Vermont Coaches Assn., in answer to our February editorial.

"Up in this neck of the woods, the same phenomenon has occurred in the interscholastic girls' game, yet there has been no radical changes in the rules. In the 1937 state tourney, the average score was 25-16. In 1947, the average score jumped to 52-40.

The greatest coach-son combination in school sports—the Bruce Fishers of Bedford (Pa.) High School. Look at the magazine they read.



Johnstown (Pa.) Democrat

"Something besides the rules is to blame for this. One factor, I believe, is the increasing height of players. Another is improved shooting. And still a third is the trend in officiating towards favoring the offense."

**Mr. Lambert's theory** is very provocative, but we still maintain the increase in scoring—at least in the boys' game—is due primarily to three factors: (1) the elimination of the jump, adding extra playing time; (2) the tremendous speed-up of the game; and (3) the great increase in shooting. We don't subscribe to the thesis of increasing height, improved shooting, and new trends in officiating.

**Our long-time friend** from Drew University, Albert B. Wegener, tells us he was unusually interested in the game, *Volley-Bounce*, which J. B. McLendon and L. T. Walker broached in the March issue.

"In a book entitled, *Play Games*, which I wrote in 1930, I suggested a number of variations of volleyball, among them being—I quote: 'Volley and bounce ball. The ball may be allowed to bounce once between any two players before being batted over the net.'"

"This is a gratifying coincidence and I want to commend the authors for having hit upon an attractive variation of the game and to suggest that they and others consult the list of other variations on pages 65 and 66 of my book (if you can get a copy), and improvise a few more of these good gym games."

**Can you name a better coach-son combine** in high school sports than the Fisher family of Bedford (Pa.) High School? Papa Bruce is one coach who will never be heckled out of town for using sonny (Bruce Jr.) on the varsity. Bud happens to be one of the greatest all-round athletes in schoolboy circles. During the past three seasons, he led Bedford to three straight county basketball championships, winding up the past season with an average of 19.67 points per game.

In football, he was the main cog in Bedford's unbeaten 1944 machine, being picked as alternate on the all-state team. He passed, kicked and ran with superlative skill, punting left-footed and passing right-handed. With Bud at the helm, the Bisons won 23 games and lost only 4 in three years. Bud also plays baseball, swims, dabbles in golf and tennis, and is a whizz in the classroom, having never missed the honor roll in four years.

Is papa Fisher proud of his offspring? Don't ask! And Bruce Jr. is just as proud of papa. All those championship teams he played on were Fisher Sr. creations.

**If you heard Bob Feller** on the Bob Hope program the other week, you now know what killed vaudeville and what will probably kill radio (we hope). Get this dialogue:

**Feller:** "How do you know I used to milk cows?"

**Hope:** "When we shook hands, you gave me three long pulls and two short ones on the middle finger."

You could hear the rending of fur-



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niture as the studio audience threshed about in helpless laughter.

**People who don't like** basketball officials point out that modern basketball is 5% running, 5% acromegalic, and 90% whistle blowing. One thing you can't deny, however—officials have courage. The bravest man we know is a ref named Doc Sugarman, who used to work a lot of Celtic games.

One day the Celtics hooked up with a Jersey outfit starring a big bruiser of a guy named Rusty Saunders. To Rusty was given the unenviable job of covering Nat Holman. Nat, in addition to being the slipperiest forward in basketball, was a thespian in the Barrymore tradition. He could swoon convincingly at the merest suggestion of body contact. And the job he did on Saunders was a beauty. He kept drawing foul after foul, as Saunders got madder and madder.

After his 15th personal, Saunders blew his top. He strode over to Sugarman and looked down at him. "Doc," he roared, "call just one more foul on me and I'll kill you!"

The game resumed. The Celtics worked the ball in and out, while Holman tried to sneak past Saunders. Suddenly he pulled a change of direction. But Saunders wasn't fooled. He stepped over and Holman was blocked off—but fairly. So Holman

went into his swoon act. Just then Sugarman looked up. He saw Holman on the ground with big Saunders looking down at him.

Sugarman walked to the sideline, faced the crowd, and threw his hands up dramatically. "Before I die," he thundered, "ONE FOUL ON SAUNDERS." (Credit for this story goes to Irwin Rosee, of News Alliance, N. Y.)

**Fire-engine basketball** was just a rumor the day Aberdeen and Mitchell met the past season. The 10 boys played on dimes for over half the game. Our reporter, Larry Desautels, of the Aberdeen *American-News*, tells us Aberdeen surprised the Kernels with a zone defense, and that after Mitchell got an 11-9 lead, coach Joe Quintal directed his guards to hold the ball and make Aberdeen come out.

Coach Reedy Fossum of Aberdeen kept his players back in their zone, and the remainder of the half passed with the two Mitchell guards playing catch at mid-court. There was a brief flurry at the start of the second half as Aberdeen got the tip-off and scored a goal. But a free throw put Mitchell back in the lead, 12-11, and the Kernels went back into their stall.

Guard Bob Murphy held the ball for the remaining seven minutes of the third quarter, while the crowd

of 4,000 hooted and showered the floor with scorecards and anything else that was handy.

This went on until just four and a half minutes of the game remained. Fossum then sent his boys after the ball. They scored three free throws, stalled out the last minute, and won, 14-12.

**A loud locomotive** is in order for the Michigan State Relays, perhaps the biggest indoor track meet in the middle west. The Relays celebrated its Silver Anniversary last February, and as part of the program Michigan State College honored all the track coaches in the land who have been coaching for 25 years or more.

The list came to 51, topped by Bill Hayward of Oregon with 52 years and John Moakley of Cornell with an even 50. Tom Jones, dean of mid-western coaches, has been track tutoring 41 years, the past 35 at Wisconsin. Down South, the palm goes to Archie Hahn, Virginia coach, who has 39 years of track coaching behind him.

What other sport in the land can boast of such long-time servitors? Track coaching apparently is the one job that has fewer occupational hazards than bank guarding.

**Favorite cut-off play:** N. B. C. to Fred Allen.

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APRIL	"Tobacco, Alcohol, Drugs"
MAY	"Hygiene of Special Organs"
JUNE	"Personal Social Adjustment"



by DR. HENRY F. DONN

**T**HE Hygiene of Special Organs includes the care of the eyes, ears, nose, and throat. Unfortunately, most of us take these organs for granted—until pain or an infection indicates their presence.

Many defective eyes and ears resulting in impaired vision and poor hearing might have been prevented if discovered soon enough. Thousands of people might have saved their normal vision and hearing had they been instructed on the recommended habits, attitudes and knowledges presented in this unit.

Draft statistics, school medical examinations, and the records of private practitioners indicate that the average community has a prevalence of defective eyes, followed by a few cases of defective ears and a scattering of nose and throat difficulties.

## HABITS

1. Avoid all self-medication of eyes, ears, nose and throat.
2. Keep sunlight and glaring lights from shining directly into eyes. Protect eyes from sun with correctly fitted glasses.
3. Hold reading material approximately 14 inches from the eyes.
4. Read by light coming from above and slightly behind.
5. Do not read when the body is unduly tired.
6. Wear glasses without compulsion when prescribed by a reputable oculist.
7. Clean glasses frequently.
8. If glasses are worn, arrange for periodic eye examinations.
9. Rest eyes frequently when doing close work.
10. Avoid reading or writing while lying down.
11. Protect ears and nose when swimming or diving.
12. Have ears examined immediately upon any symptoms of ear trouble.

This is the eighth of a series of articles on the constituents of a personal hygiene course for high school boys, by Dr. Henry F. Donn, physical education instructor and basketball coach at Weequahic High School, Newark, N. J.

diately upon any symptoms of ear trouble.

13. Avoid yelling directly into a person's ear.

14. Avoid dusty or impure air that might be injurious to the nose and throat.

15. Breathe properly through the nose.

16. When suffering from a cold or other infectious disease, use only paper handkerchiefs which are burned after use.

17. Blow nose gently at all times.

18. Avoid placing any foreign object around the eyes, ears, nose or in the mouth.

19. Obtain prompt medical treatment for any sort of injury to the eyes, ears, nose and throat.

20. Use recommended practices of first aid in the event of injury to the eye, ear, nose and throat.

## THE EYES

The eye is a globe a little more than an inch in diameter. Our sense of sight, the ability to see form, color and motion is made possible by the two eyes located in the upper-front part of the head.

Each eye is protected by being placed in a bony orbit in such a position that the bone protects it from blows: a bed of fat protects it from banging up against the bone; lashes and eyelids protect it by dropping immediately when something approaches it or touches the lids; and tear glands provide a substance which washes across it, cleanses away dirt and prevents it from drying.

Few people are born with perfect eyes. The factors causing defective vision may be heredity, prenatal disease, defects in the shape of the eye-

ball, focal infections, childhood diseases and accidents.

If discovered early enough, eye abnormalities are often correctable to a great degree and are sometimes entirely curable. Most visual defects which arise from faulty structure are correctable by the use of proper glasses.

## ANATOMY AND PHYSIOLOGY OF EYE

The eyeball is composed of three coats. From without inward, these are:

1. The *Fibrous Coat* containing the sclera and the cornea.

The *Sclera* is the tough outer wall or white of the eye. It completely surrounds the eyeball except for a small opening in the back where the optic nerve and the blood vessels enter the eye. The sclera protects the eye, gives shape to the eye, and provides attachments for muscles to move the eye.

The *Cornea* is located in the front part of the eye. It has no color and is perfectly transparent.

2. The *Vascular Coat* containing the choroid and iris.

The *Choroid* is a thin, dark brown membrane lining the inner surface of the sclera. It contains the blood vessels that nourish the eye.

The *Iris*, front part of the choroid, gives color to the eye. If there is no pigment or very little, the eye is blue; with increasing amounts of pigment, the eye is gray, brown or black.

The *Pupil* is located in the middle of the iris. It changes in size as the muscles of the iris expand and contract and so controls the amount of light entering the eye. The pupil looks like a black spot in the middle of the iris.

The *Lens* of the eye is located behind the pupil. It is double convex in shape and acts as a partition to separate the front chamber of the eyeball from the back chamber. The function of the lens is to focus light rays so that they fall directly on the retina.

3. The *Visual Layer* or *Retina* is made up of nine layers, and lines the back of the eyeball. The nerve cells of the retina that are sensitive to light are called *Rods* and *Cones*. There are over one million of them. The nerve impulses they generate are transmitted to the brain by the *Optic Nerve*.

The *Macula Lutea* is a tiny yellow spot on the retina which makes possible sharp images. The area that surrounds the macula lutea produces the dim background vagueness when we see out of the corner of our eyes.

The hollow parts of the eyeball are filled with a transparent liquid known as *Humor*. The *Conjunctiva* is the mucous membrane lining the eyelids. It is continuous with the mucous membrane lining the nose. The eyeball has six muscles that move it around in its socket.

In seeing, light reflected from the object looked at passes through the lens in the eye and forms an upside-down picture on the retina. This pic-

ture stimulates the rods and cones in the retina and causes them to send impulses to the brain via the optic nerve. The brain interprets these impulses and at the same time turns the picture right-side up.

#### VISION AND EYE TESTING

Many types of tests are used by the expert in determining the status of the eyes and the vision of the person. Eye tests can determine what kind of seeing machinery a person has and vision tests indicate how that machinery is used.

1. *Visual Acuity* is the faculty which the eyes possess of perceiving the shape and form of things. Visual acuteness is tested for distance and nearness.

The *Snellen Chart Test* is used to measure distant-vision. In testing for distance, a range of 20 feet is used: 20/20 is normal vision. The numerator in this fraction means the distance in feet between the test letter and the person whose eyes are being tested. The denominator is the distance in feet at which the letter is supposed to be seen. The higher the denominator with respect to the numerator, the poorer the visual acuity.

The *Jaeger's Test Types* are used for near-vision testing. They consist of different sizes of printer's type; the smallest being numbered 1, and the larger types being numbered successively.

The *Keratometer*, an instrument that looks like a telescope, is used by the expert to determine if the person is suffering from astigmatism (blurred vision).

The *Keystone Ophthalmic Telescopical* with accompanying slides makes possible the testing of visual acuity, the action of the eye muscles, the ability to fuse objects, and the refraction errors of the eyes.

*Accommodation Tests* determine the ability of a person's eyes to focus first on objects near at hand and then quickly on objects far away.

2. The *Ishahaira Test* is used to determine color vision. The color blind person and the normal person see different numbers on a series of colored plates.

3. The *Allen Gonioscope* permits thorough diagnoses, observation and planning of eye surgery. This instrument is particularly useful in the diagnosis of glaucoma, a serious eye disease.

4. The *Biophotometer* is the instrument used to measure the time it takes for a person's eyes to regenerate visual purple in the retina and thus recover from "night-blindness."

#### COMMON DEFECTS OF THE EYE

1. *Cross eyes*: The converging muscles of the eyeball become so overdeveloped that the eyes become crossed. If only one eye turns in, the vision in that eye doesn't develop. If first one eye and then the other turns in, the person may see with each one perfectly well, but the eyes won't focus together. If treatment is received early enough, this condition is

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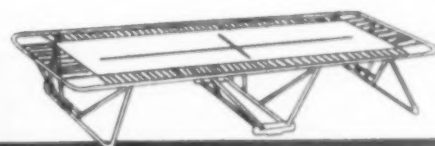
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correctable with glasses. Otherwise exercise (*Orthoptics*) and perhaps surgery may be necessary.

2. *Nearsightedness (Myopia)*: Rays of light entering the eye are focused in front of rather than on the retina. The usual cause is elongation of the eyeball. When the head is bent over, the eyeball becomes a little longer from the weight of the liquid in it, hence the necessity for good posture while reading. Nearsightedness is correctable with glasses.

3. *Farsightedness (Hyperopia)*: Rays of light entering the eye are focused behind the retina rather than directly on it. The usual cause is, the eyeball is too short from front to back. Hyperopia is correctable with glasses.

4. *Presbyopia*: A defective condition of accommodation in which distant objects are seen distinctly but near objects are indistinct. It is said to be caused by a loss of elasticity of the lens. Presbyopia is correctable with glasses.

5. *Astigmatism*: The curvature of the lens of the cornea is defective causing a person to see one part of an object more distinctly than another part. Correctable with glasses.

6. *Cataract*: The lens of the eye is normally perfectly transparent. If it loses this transparency and becomes opaque, a cataract is present. The cause is unknown. Cataracts are removed by surgery.

7. *Night-blindness*: A person's sensitivity to glare depends on the ability of the substance known as visual purple which is bleached by strong light, to regenerate quickly in the cells of the retina. When regeneration of visual purple is slow, momentary blindness is evident. Vitamin A, known as the ophthalmic (eye) vitamin, is necessary for regeneration of visual purple.

8. *Glaucoma*: An increase in pressure within the eyeball which damages nerves and blood vessels in the retina so that vision is impaired. The exact cause is unknown. Blindness from this disease can be prevented in a large percentage of cases if a diagnosis is made while it is in its early stages and if the treatment is prompt, adequate and continuous.

9. *Stye*: A localized swelling at the base of an eyelash usually caused by a germ. Recurrent cases of sties may necessitate a vaccine injection.

10. *Pink eye*: Caused by the Kock-Weeks bacillus, a germ that gets into the eye and causes inflammation. It is very contagious and spreads rapidly.

11. *Streptococcus infection*: May develop together with sore throat or scarlet fever. Usually there is a discharge from the eye and the disorder lasts a long time.

12. *Keratoconjunctivitis*: A swelling of the lining membrane causing a burning, smarting and a great deal of pain in the eye. Usually, there is a swelling or lump in front of the ear. The eye has a steady watery discharge and there may be blurred vision. The cause is unknown but may be a virus.

13. *Acute inflammation*: May be caused by the viruses which cause measles, chicken pox, smallpox, and certain allergies.

14. *Corneal opacity* (no light comes through): In certain instances where the cornea has been injured by accident or disease and no other part of the eye or optic nerve is diseased or injured, it is possible through surgery to remove the opaque cornea and replace it by grafting a healthy cornea from another living person or one who has just died.

15. *Mechanical injury* to the eye may be due to fireworks, sharp pointed instruments, and toys of various kinds piercing the eye. Accident prevention is important.

#### HYGIENE OF THE EYE

1. The examination and treatment of eyes should be done only by competent, qualified and recognized experts.

An *Ophthalmologist* or *Oculist* is a physician (M.D.) who has special training in the care of the eyes. He does not furnish glasses but prescribes them.

An *Optician* is one who designs, makes and adjusts glasses. He does not prescribe them.

An *Optometrist* is one who diagnoses eye defects and furnishes glasses. He is not a medical doctor.

2. The eyes of everyone should be regularly and periodically examined by experts.

3. Any type of self-medication or patent-medicine treatment of the eye is hazardous.

4. A foreign body embedded in the eye should be removed only by a physician.

5. Rest the eyes frequently while doing close or concentrated work.

6. For eye-health, maintain the best possible health status of the body at all times.

7. Avoid reading books and other reading material that is printed indistinctly, in small type, or on glossy paper.

8. Reading should be held approximately fourteen inches from the eyes. One should not read or write while lying down or traveling in a moving vehicle. Always read with your head up.

9. The light for reading should come from above and slightly behind the reader. It should be sufficient, well diffused, and evenly distributed. Bright lights striking the eyes have a cumulative effect of fatigue.

10. Only a clean, individual washcloth, towel or handkerchief should be used around the eyes.

#### THE EARS

**T**HE part of the ear that we see, called the *Outer Ear*, is but a small part of the hearing apparatus. Shaped like a funnel, its function is to catch sound waves and carry them to the middle ear. Many parts aid in the performance of this function.

1. The outer ear consists of a framework of cartilage, some fatty tissue

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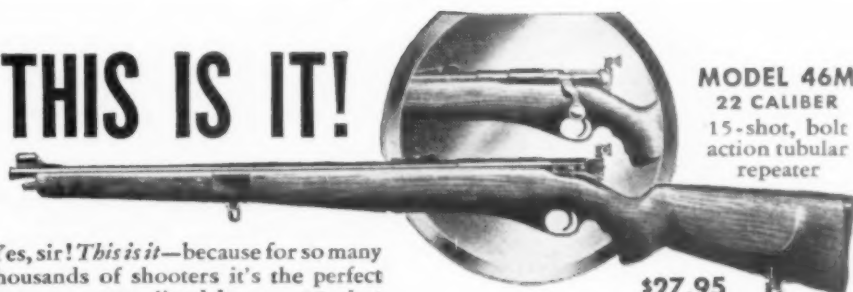


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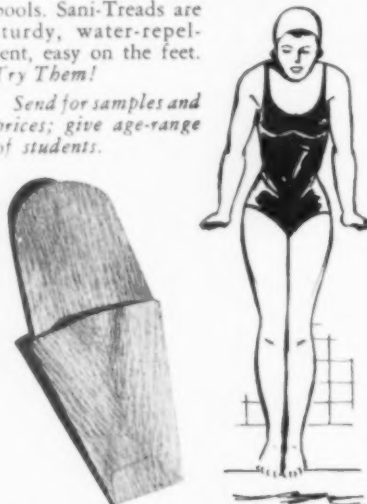
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and a few muscles, all of which is covered by the skin. Ligaments attach each ear to the side of the head.

2. The *Auditory Canal*, a curved passageway about one inch in length, has its outer opening in the lower front part of the outer ear.

3. *Hair*, located at the outer entrance of the auditory canal, and *Glands* which secrete a *Wax*, located farther along the passageway, help protect the outer ear from particles of dust and other foreign bodies.

4. The *Drum*, a thin membrane covered on the canal-side by skin and on the middle-ear side by mucous membrane separates the outer from the middle ear.

### THE MIDDLE EAR

The *Middle Ear* is a small, irregular cavity located in the hard portion of the temporal bone. Although small (five or six drops of water would completely fill it) its important function is to relay sound from the outer to the inner ear.

1. Three tiny, movable bones called the *Malleus* or *Hammer*, the *Incus* or *Anvil* and the *Stapes* or *Stirrup*, stretch across the cavity from the Eardrum to the *Oval Window* or *Fenestra Vestibuli*.

2. An opening in the back part of the cavity leads to the *Mastoid* bone.

3. An opening in the front part of the cavity leads to the *Eustachian Tube*, a small canal about one and a half inches long and three-eighths of an inch wide which leads directly to the area of the throat. The opening in the throat is kept closed by tissue. On swallowing, the throat-opening, which is quite wide, is opened. In this way, the pressure of the air in the middle ear against the eardrum, is kept equal to that against the eardrum from the outside.

4. The middle ear is separated from the inner ear by a very thin bony wall in which there are two small openings covered with a fibrous membrane. These openings are called the *Fenestra Vestibuli* or *Oval Window*, and the *Fenestra Cochleae* or *Round Window*.

The *Internal Ear* located in the hard portion of the temporal bone, receives the terminations of the auditory nerve and is therefore the essential part of the organ of hearing.

1. Three peculiarly shaped bones called the *Vestibuli*, *Cochlea* and *Semicircular Canals*, form the *Bony Labyrinth* of the middle ear.

2. In the bony labyrinth of the inner ear, the *Membranous Labyrinth* winds its way through the cavities, assuming their general shape.

3. The *Perilymph* is a fluid that separates many parts of the membranous labyrinth from the bony labyrinth.

4. The *Endolymph* is a fluid that fills the cavity within the membranous labyrinth.

5. The *Cochlea* contains the *Nerve Terminals* for receiving the sound

stimuli which are then relayed to the *Brain*.

### PROCESS OF HEARING

All bodies which produce sound are in a state of vibration, and communicate their vibrations to the air with which they are in contact. In hearing, these sounds are picked up by the outer ear's flared structure, carried along the *Auditory Canal* where the vibrations are received by the *Eardrum*. Vibrations of the *Eardrum* are communicated to the *Malleus*, taken up by the *Incus* and transmitted to the *Stapes* bone of the *Middle ear*.

These vibrating bones cause the membrane leading into the *Inner ear* (across the *Fenestra Vestibuli*), to be alternately pushed in and out, thus transmitting the vibrations to the *Perilymph* fluid. The movement of this fluid in some unknown way, stimulates the *Nerve endings* of the *Auditory Nerve* which conveys the impulses to the center of hearing in the *Brain*.

In a quiet room, with a person standing profile to the examiner, doors and windows shut, eyes closed, one should hear an ordinary whisper at twenty feet.

The *Audiometer* is a more reliable instrument for testing hearing. It generates pure tones at eight different pitches ranging from very low to very high. A dial like that of a radio set, records the strength of the tone. The hearing level is indicated by the weakest of the eight pitches.

The *Audiogram* or graph picture, obtained from the audiometer, shows how great is the loss of hearing. The loss is measured in decibels, the loudness unit. A loss of 25 decibels should call for a hearing aid.

### HYGIENE OF THE EAR

1. Acute infections of the ear, from whatever source, are potentially dangerous and need the immediate care of a physician. The *Otologist* is a physician who specializes in the treatment of the ear.

2. No drug or known device will cure deafness.

3. The most important protection to the ear is the prevention of head and throat infections.

4. The ears should be protected from injury when participating in contact sports.

5. Every earache should be attended immediately by a physician especially if it is accompanied by fever. Under no circumstances should anyone but a physician remove wax from the ear.

6. Eardrum protectors are good to use when swimming. Unless proper precaution is taken, high diving may injure the eardrum. If the eardrum is intact, it does no harm for water to enter the auditory canal. It is all right to wear cotton for the relief of external pressure, but it does no good as a preventative of hearing difficulties.

7. Prolonged exposure to loud



noises may result in the impairment of hearing.

8. Those who are hard-of-hearing should be fitted with hearing aids best suited to the particular type of hard-of-hearing.

9. There are on the market, a number of efficient instruments that are valuable as aids to hearing.

10. Keep your body in good physical condition by observing the hygienic rules of living.

#### NOSE AND THROAT

**T**HE nose is the organ of the sense of smell, but it also serves as a passageway for air going to and from the lungs. It filters, warms, and moistens the entering air and also helps in phonation.

1. The external section of the nose is composed of a triangular framework of bone and cartilage, covered by skin.

2. Two oval-shaped openings called *Nostrils* whose margins are provided with a number of *Hairs*, are the external openings for the nasal cavities.

3. The *Nasal Cavities* are two wedge-shaped cavities separated from one another by a partition or *Septum*.

4. Communicating with the nose are several cavities or chambers in the skull called *Sinuses*.

5. *Mucous Membrane* lines the cavity of the nose.

The *Pharynx*, or throat, is a muscular tube about five inches long and shaped like a cone. It acts as a passageway for air from the nose and mouth and serves as a resonating cavity in the production of the voice. Mucous membrane completely lines the throat.

1. Two openings in the upper part of the throat lead to the nose.

2. Two openings, one on each side of the throat lead into the Eustachian tube, thus connecting with the ears.

3. One large aperture connects with the mouth.

4. Two openings in the lower part of the throat lead to the larynx or voice box and the esophagus or digestive tube.

5. In the back and upper part of the throat, there is a mass of soft tissue called *Adenoids*.

6. On either side of the lower part of the throat the *Tonsils*, small masses of tissue, are located.

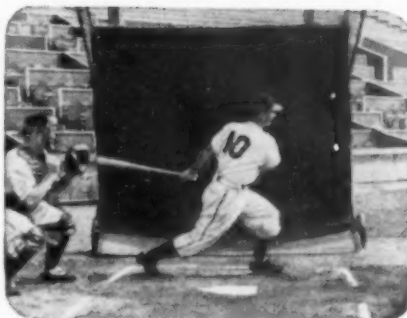
7. Muscles are located in the throat to aid in the process of swallowing.

#### HYGIENE OF NOSE AND THROAT

1. Forceful blowing of the nose may cause nosebleed, congestion and severe injury to the ears. It is much better to pull the air back through the nose. "It is a much safer practice to blow the nose backwards than forwards."

2. When used by a person who has an infection, the cloth handkerchief is unsanitary and provides a means for the spreading of infection and contamination. It is safer to use paper handkerchiefs which can be disposed of by burning.

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3. Nasal sprays and nose drops may relieve stuffy feelings and headaches temporarily, but they do not favor the sinuses.

4. Gargling is useless no matter what or how you gargle. In every technique of gargling, the tongue is so firmly pressed against the soft palate (roof of the back part of the mouth), that the liquid cannot reach back to the throat.

5. Congestion with swelling of the soft tissues of the nose (Coryza), occurs during acute infection and makes breathing difficult. When infections occur often, a physician should be consulted. A physician that specializes in the treatment of the nose is called a *Rhinologist*.

6. Tonsils should be removed only when they have become a foci of infection and when breathing is obstructed due to their enlargement. This decision should be left entirely to the physician.

7. The alleged value of commercial preparations for nose hygiene is greatly exaggerated.

8. Hands and foreign objects should be kept away from the nose.

9. The act of blowing the nose should be performed gently and with the mouth open.

10. Breathing through the nose is better than breathing through the mouth.

**SUGGESTED ACTIVITIES**

1. Have a student committee report on the available local facilities for the professional treatment of the eyes, ears, nose, and throat.

2. Have a student committee report on the provisions made by schools for children with hearing and seeing handicaps.

3. Have a report made on the national organizations interested in the conservation of sight and hearing.

4. Have a boy scout present the accepted procedures in the first aid care of common injuries to the eyes, ears, nose, and throat.

5. Have a student draw a poster on the parts of the eye, another on the parts of the ear, and a third on the parts of the nose and throat.

**BIBLIOGRAPHY**

Because of the length of this article, the bibliography was purposely omitted. Insurance companies, government publications and organizations interested in the conservation of sight and hearing have pamphlets and publications by the score.

Anybody got a big anti-aircraft searchlight? The Atlanta baseball club is looking for a "lamp" that will throw a beam into the sky visible for 25 miles. They want to use it as a signal for night games, turning it on whenever there is doubt about whether the game will be played. "Come, ye faithful, where there is light, there is baseball."

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**AN INTRODUCTION TO PHYSICAL EDUCATION.** (Third Edition.) By Eugene W. Nixon and Frederick W. Cozens. Pp. 251. Philadelphia: W. B. Saunders Co. \$2.75.

**ALTHOUGH** the passage of years and the impact of social forces have wrought many changes in physical education, the authors, both famous California educators, feel that the original thesis of their text is still sound.

They have attempted to provide a text which will give the prospective teacher, early in his training, some understanding of what is involved in the profession and in adequate preparation for teaching.

The book is divided into three main parts: Philosophy and Principles, Significant Problems, and Professional Outlook. Practically all of the 16 chapters, including the general bibliography at the end, have been thoroughly overhauled and, in some cases, completely rewritten.

Materials covering some of the significant influences which have affected our American physical education between two world wars have been included in Chapter 13.

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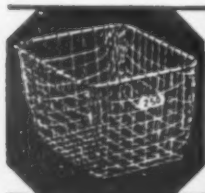
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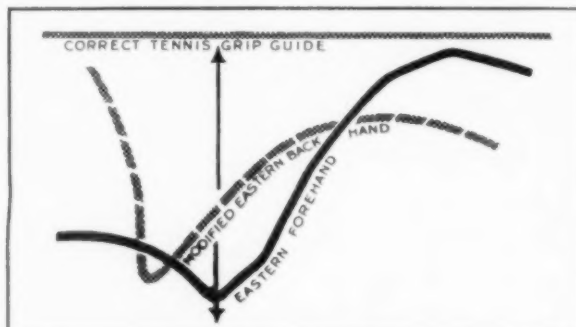
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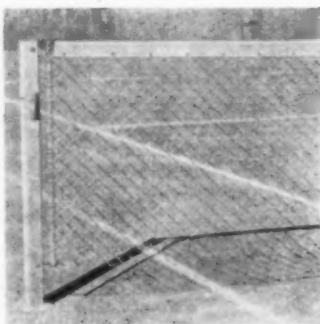
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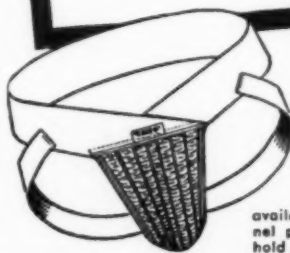
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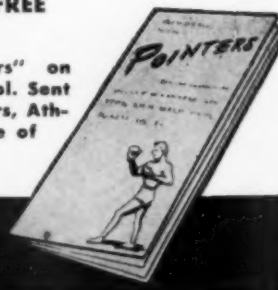
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## **Steers Jumping!**

(Continued from page 10)

Rule-makers smoothed out this difficulty by prescribing a jumping standard constructed with a T-shaped support. Since the cross-bar under the new rule rested on top of the T rather than in the angle of an L-shaped support, the same contact with the upper arm would displace the cross-bar. Up to the present time, the T-support seems to have met universal approval.

Shortly after the Osborn era, a number of jumpers making use of the Western form altered the execution so that the belly, rather than the side, was toward the cross-bar. This style of execution is best known, perhaps, as the "straddle" form, but also has been called the "belly roll" and the "modified Western" form.

The present world's record holder, Les Steers, made use of the western form exclusively in his early competition. In championship meets of 1941 he began with the Western form, then, when the cross-bar was elevated to about 6-5, switched to the Straddle form.

**Problems of the jumper.** The student of high jumping must determine first which form will be most effective for him. Very few athletes concentrate on the scissors because of the mechanical limitations of this style.

The Eastern style still has a goodly number of adherents. But the largest number of jumpers use the Western. However, more and more men are gravitating towards the Straddle form.

After the athlete has selected the form of jump, he considers the approach, address to the bar, cross-bar clearance, and the landing.

**The approach.** A well-planned approach brings the contestant to a given spot with the take-off foot at the most desirable angle, and with the correct amount of speed. The length of the run varies from a low of seven strides to a high of fourteen.

A few champions, including Steers, do not rely on fixed tape-measure check-marks. But these are exceptional individuals who are able to sense during the run when to shorten and when to lengthen, so as to strike the take-off correctly.

The average jumper will find valuable the use of two check-marks at four strides and eight strides from the take-off spot.

The angle of approach is approximately 45°, but some athletes switch to an angle of about 30°



when attempting their greatest heights.

Usually the first half of the approach is run at about one-third of the jumper's best sprinting effort. In the second half, the pace is increased to approximately two-third effort.

The rate of speed of the run is an individual matter, and is arrived at through experimentation. For example, Steers states he does not like to speed up too much, aims to keep the same rhythm. But as the cross-bar goes up, he starts slowly, and on the last three steps "I really pour it on."

**Addressing the bar.** As the jumper addresses the bar, he attempts to retain rhythm. Most athletes do not require much speed—only enough to get them across the bar. They switch to a loose free-wheeling run just before the take-off. The last stride is lengthened. A flat-footed or heel-ball landing is made with the take-off foot.

(It was pointed out previously that Steers deviates from the above plan by using a speedier run, and vigorously applying power during the last three strides.)

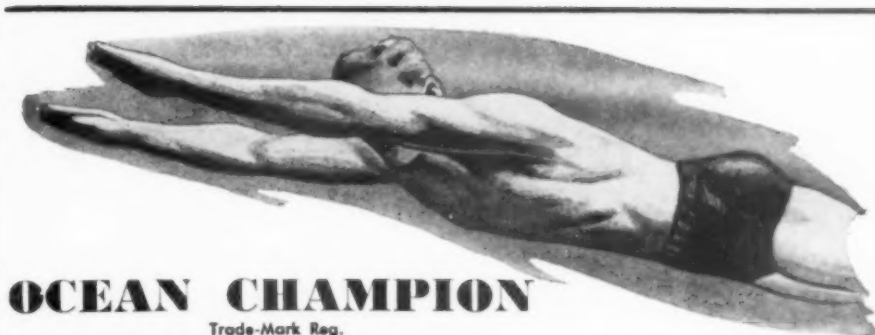
The jumper strikes the ground hard with the take-off foot to get spring. The right leg is swung upward in the direction of the bar, as the jumper completes the rock-up-on-the-toe.

**Cross-bar clearance.** The forward swing of the free leg provides the force for turning the body. The take-off leg has left the ground, and the chief problem of the jumper now is to get the take-off leg safely over the bar.

This differs with jumpers using the various styles of jump. In the Western form the knee of the take-off leg is rapidly snapped across the bar, then the leg is straightened. The execution of the leg clearance for the Straddle form is depicted in Figures 11, 12, 13, 14 and 15.

**The landing.** The landing is considered an anti-climax, since clearing the bar is the objective. Still the athlete must think of body protection, freedom from shock and injury. Jumpers, when first attempting either the Western or the Straddle forms, are surprised at the degree of strain imposed on the wrist when alighting in the pit.

In the Western, the athlete lands facing the pit and breaks the fall by extending downward both arms and one leg. The high jumper utilizing the Straddle may vary this execution by contacting the pit with the right hand and the right foot. A properly constructed pit and the knack of relaxing the body will remedy landing shock.



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# Mechanics of the Pole Vault

## (PART THREE)

**T**ESTS by Parks<sup>15</sup> at Springfield College in 1936 and others by the writer in 1940 furnish conclusive evidence that the vaulter can run fastest when he carries the pole at head height.

In repeated time trials over a 50-foot distance, men carrying the pole at head height averaged .1 of a second faster and exhibited better form in the running position.

Athletes using the low carry (parallel to the ground) did not seem to get the maximum freedom of leg action and body lean.

When the pole is held at the height of the head, its weight is compensated for to a reasonable extent, affording the athlete maximum freedom of leg action in sprint stride running and body lean.

A too-high pole-carry hinders the lowering of the pole into the box and increases its air resistance on windy days. All the top vaulters use the head-high carry and begin to lower the pole into the box on the third stride before the take-off.

If we are to assume from our calculations that the height of the vault is related to the ability to generate and use a high take-off velocity, the method of carrying the pole is of real significance. Any pole carry which delays the thrust into the box defeats the purpose of a fast run-up. This is very noticeable in inexperienced vaulters.

The ability to develop a high run speed is, of course, dependent on reaction time, muscle power and muscle viscosity. The maximum speed any man can run depends upon the internal resistance of his muscles.<sup>16</sup>

### LENGTH OF RUN

The length of the run is little related to the ability to generate high speed, but it is directly related to the mass of the body and power reaction time factors. "The inertia of a heavy body being greater, its acceleration with a given power capacity is slower."

Warmerdam stated in a recent letter to the writer that "the vaulter should use enough run to gain top

speed several paces from the take-off in order to gather himself for this action."

Warmerdam used around 140 feet. He was a slow starter, but hit 10.5 in the hundred and 23 seconds in the two-twenty. Some of the best vaulters use as little as 85 feet.

Experiments conducted by the writer with data obtained from high-speed study films indicated that 68 percent of the jumpers tested used the *springing take-off*, and by this mechanism increased their take-off velocity from 1 to 3 feet per second.

In 13 percent of the cases, the vaulters lost velocity in the take-off, and in a few cases no change in velocities was noted.

Great vaulters disagree about the *springing take-off*. In general, this disagreement revolves around the point "I make no conscious effort to *spring*."

### WARMERDAM QUOTE

In an early letter of inquiry sent to Warmerdam in 1940 he replied that he "definitely did not *spring*." In a recent letter he stated "although I never was conscious of *springing off* the ground, the left foot stamps emphatically. I always try to run off the ground, so to speak."

Sueo Ohe, the great Japanese Olympic vaulter, stressed the foot stamp a great deal. The writer also has used this effectively for years.

The *springing take-off* deserves serious consideration, and all vaulters should experiment with it. Specifically, the *springing take-off* helps the take-off velocity and swing, and aids the vaulter in changing his pure linear velocity to angular velocity.

All pole vaulters and other jumpers shorten the last stride of their run from 1½ feet to 8 inches. The purpose of this shift is to place the body weight directly over the take-off foot slightly to the right or directly in line with the pole for a straight ahead swing.

This weight shift is accomplished by twisting the right foot outward as it is planted on the last stride before the take-off foot strikes. A balanced body position is essential to a straight-ahead swing.

This is the concluding installment of a three-part series on the mechanics of the pole vault, by Richard V. Gansler, one of the greatest vaulters of all-time, who is now an instructor of anatomy and physiology at Rutgers University.

Some general observations for coaches: If the vaulter's weight is not completely over the take-off foot, he will swing up and out toward the right-hand standard. If the lean is exaggerated to the left, the vaulter's turn will be very fast and he will swing toward the left-hand standard.

Coaches wishing to correct turn speed can have their vaulters try slightly different positions of lean. A successful pole vault is at least 50 percent complete at the take-off; therefore, this point is of great significance.

All pole vaulters have their arms bent at an angle of from 90° to 110° at the moment of the take-off.

With an arm bend of 90° the vaulter can exert a maximum muscular effort (resistance to the pole plant and take-off). This is fundamental muscle mechanics.

The vaulter also has opportunity for a moderate arm extension during the preliminary stage of the swing when the run momentum is being projected onto the pole. The evidence indicates that all the vaulters permit their arms to reach "almost complete extension" during the swing.

### SWING MOMENTUM

With a slight elbow flexion, more leverage becomes available for the pull-up. The lengthening of the arms helps conserve the swing momentum. The principle is: "To conserve angular momentum, lengthen the radius on the down-swing and shorten it on the up-swing."

In fifty vaults studied, the velocity drop-off during the early stages of the swing was quite gradual and reached the maximum low just prior to the pull-up.

In comparing the successful and unsuccessful performers at comparable heights, it was obvious that the vaulters who were most successful pulled up sooner than the less successful performers (as evidenced by the position of the pole).

The difference (3°) seems quite

<sup>15</sup>Parks, S. *Mechanics of the Pole Vault* (Springfield, Mass., Springfield College Project in Biophysics, June 1938) p. 3.

<sup>16</sup>Hill, A. V. *Ibid.*



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insignificant, but, when translated into feet and inches, it means that the jumper who pulls up later is 1 foot nearer the cross-bar. As the vaulter is always working against time and space, this delay in the action often proves fatal.

In 60 percent of the vaults, which were by and large the best vaults from the mechanics viewpoint, the vaulters began their pull and turn at the same instant.

The determining factor in the timing of the pull appears to be basically mechanical rather than a question of velocity. The vaulter must delay the pull-up until his center of gravity falls in line with the pole. Any pulling force he exerts will drive the body as nearly vertical (parallel to the long axis of the pole) as possible.

If he does not do this, he will kill the forward velocity of the pole as previously mentioned.

### PULL AND TURN TOGETHER

Good vaulters attempt to start their pull and turn together. Many unsuccessful jumps can be traced to a failure to follow this principle.

The direction of the leg kick ("shoot") and the speed of the turn are very important. The speed of the turn is very closely related to the pull-up projection velocity. The experiments indicated that some vaulters execute their pull and turn in as little as .19 seconds, whereas many of the poorer performers take as long as .33 seconds.

The efficiency of the vault after the take-off swing velocity has been expended, depends primarily "on the speed of the pull-up and turn," assuming that the direction of motion is correct.

In the final analysis, the success of any vault depends on the direction of the push-up and the placement of the pole vault standards. The push-up angle between the shoulder tip and vertical of the pole was measured. In the successful vaults it averaged 76°, whereas the unsuccessful performers pushed at 48°.

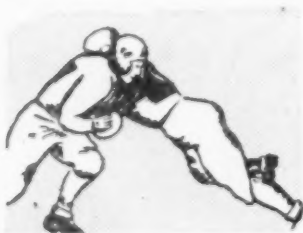
Better vaulters execute their turn around the pole in such a fashion that, upon completion, their right shoulder is still touching the pole and their body weight is as close to the pole as possible.

This means the feet and hips are high in a near vertical position. In this position, the vaulter is momentarily pushing down on a relatively solid support.

The vaulters tested did not bring their pole to a true vertical, but stopped at approximately 85°. This

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probably does not affect the push-up a great deal and it assures the pole of falling backward.

All of the world ranking vaulters and coaches agree that the flyaway is the best clearance form. In this technique, after the vaulter reaches his peak height over the bar, he un-jacks his body, folding the legs back and throwing the head, chest and shoulders upward in order to clear these parts.

This form takes years of experience to master, as it must be executed in a fraction of a second. An arch finish in the pole vault is merely an attempt to save the vault where the vaulter does not project himself over the bar at high enough speed. All top vaulters use it, but only when forced to do so. It is significant that all the top vaults from 14.5 to 15.8½ have been made with this technique.

*Methods of performing the pole vault.* Although slight variations in technique exist, there is a definite pattern which all vaulters follow. In general, the better vaulters achieve a much greater degree of refinement in their *mechanics*. Their movements are faster and better synchronized to exploit the principles discussed here. A comparison of the center of gravity paths of these men indicate a "smoother distribution of work."

Poorer performers either take an exaggerated swing and a quick pull-up or a too short swing and a slow pull, thereby losing efficiency in both phases of the action.

#### SYNCHRONIZED MOVEMENTS

Good jumpers blend all these phases into one. Optimal swing, pulling and turning rapidly and vertically, and a push-up blended into the pull and turn. Good jumpers do no work until the center of gravity falls in line with the pole; then all movements are made as one, keeping the center of gravity as close to the pole as possible throughout the action. Good vaulters never make deliberate movements.

Except for slight variations in the tracing of the path of the center of gravity, a comparison of the successful and unsuccessful performers indicates that there is a general pattern for all.

As the height of the bar increases, certain modifications in the timing of the action cause the base and cone of the parabola to become narrower (less horizontal travel), thereby increasing the overall efficiency of the jump.

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this, that the higher the bar is raised, the shorter the period of time the vaulter will remain at his peak height, and therefore the more highly perfected his clearance technique must be.

The only manner in which the vaulter can allow himself more time and space over the bar is to hold the pole higher or flatten his parabola of flight. There are strict limitations in these. Some vaulters cannot leave the ground smoothly with too high a grip. Others need all their velocity for vertical travel and have to save the vault by arching the body.

Assuming the general mechanics are fairly efficient, "the success of the vault depends upon a very accurate placement of the vaulting standards." This implies (1) a steady vaulting pattern, (2) modifications in timing to adjust for wind, rain, slow track, slow reaction time, changes in physical condition or changes in hand-grip from day to day.

Any horizontal travel in the vault not needed to clear the bar is lost efficiency. This means that all the kinetic energy of the run and swing is not being converted into vertical height. Conversely, too vertical a lift and an abrupt pull-up, will not give maximum efficiency because the vaulter often does not retain sufficient momentum to carry across the bar.

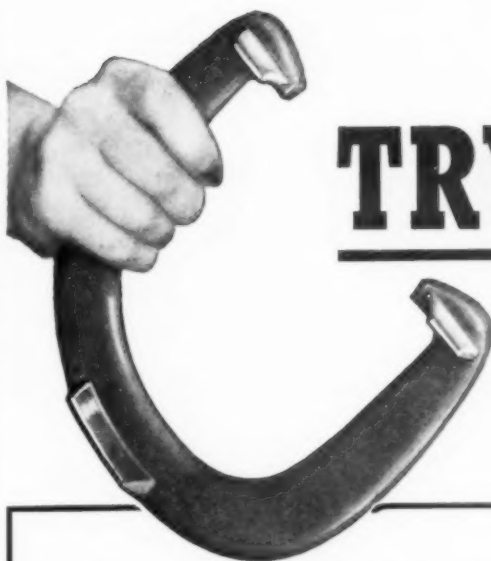
#### REACTION TIME AND IMPLICATIONS

Men without a fast reaction time cannot be great vaulters. For vaults up to 13 feet, the average time of flight for 50 trials was 1.01 seconds from the moment of take-off to the moment of clearance. The average time of flight from take-off to completion of the swing was .24 seconds. As previously stated, the duration of the pull and turn never exceeded .33 of a second.

This allows the vaulter only .44 seconds to complete the push-up and release. It is very obvious that a vaulter who does not have a fast reaction time either will not have sufficient time to execute his movements or he will have to slow his run to such an extent that he cannot develop enough kinetic energy in the take-off and pull-up to raise his body above certain minimum heights.

This is inefficient because the less work the vaulter does in the run the more work he must do in the pull-up, and the load limits for the arm muscles are very exact and determined by the material available.

**Conclusions.** Warmerdam cleared 15 feet 8½ inches with the top of  
(Continued on page 63)



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# Pick Your Coach and Coaching School

School men contemplating attending a coaching school this summer may use this directory to locate the schools at which their favorite college coaches will lecture. Complete information on the schools listed may be gleaned from the School Directory that follows.

## FOOTBALL

- ANDERSON, EDDIE (Iowa)—New Mexico Coaches (see adv. p. 60); Wentworth Mil. Acad. (see adv. p. 62).
- BIBLE, DANA X. (Texas)—Adams St. College (see adv. on p. 59).
- BIERMAN, BERNIE (Minnesota)—U. of Minnesota.
- BIXLER, PAUL (Colgate)—U. of Connecticut (see adv. on p. 59).
- BRYANT, PAUL (Kentucky)—Georgia Coaches Assn.; U. of Kentucky.
- BUTTS, WALLY (Georgia)—Utah St. Agric. College.
- CRISLER, FRITZ (Michigan)—Wisconsin Coaches Assn. (see adv. p. 62); N. Y. Ath. Assn. (see adv. p. 60).
- DAVIES, TOM (Western Reserve)—Edinboro.
- DREW, RED (Alabama)—Bethany College (see adv. on p. 62).
- ELIOT, RAY (Illinois)—Adams St. College (see adv. on p. 59); Illinois Coaches Assn. (see adv. on p. 61); Ohio Football (see adv. on p. 62).
- ENGLAND, FROSTY (Arkansas St.)—Fremont (see adv. on p. 61).
- ENGLE, RIP (Brown)—Rhode Island Coaches Assn.
- FESLER, WES (Ohio St.)—Ohio Football (see adv. on p. 62).
- FAUROT, DON (Missouri)—U. of Missouri; Wentworth Mil. Acad. (see adv. on p. 62).
- HARLOW, DICK (Harvard)—Eastern Penn. Coaches Assn. (see adv. on p. 61).
- HICKMAN, HERMAN (Army)—Eastern Penn. Coaches Assn. (see adv. on p. 61); Rhode Island Coaches Assn.; U. of Connecticut (see adv. on p. 59).
- HIGGINS, BOB (Penn St.)—Bethony College (see adv. on p. 62).
- HOLCOMB, STU (Purdue)—Edinboro.
- LEAHY, FRANK (Notre Dame)—Iowa Ath. Assn.
- McMILLIN, BO (Indiana)—Texas Coaches Assn. (see adv. on p. 62).
- MUNGER, GEORGE (Pennsylvania)—U. of Connecticut (see adv. on p. 59).
- NEELY, JESS (Rice)—Texas Coaches Assn. (see adv. on p. 62).
- ODELL, HOWIE (Yale)—Illinois Coaches Assn. (see adv. on p. 61).
- SANDERS, RED (Vanderbilt)—Louisiana Coaches Assn. (see adv. on p. 61).
- SAUER, GEORGE (Kansas)—New Mexico Coaches (see adv. on p. 60).
- SNAVELY, CARL (No. Carolina)—Rhode Island Coaches Assn.; Eastern Penn. Coaches Assn. (see adv. on p. 61).
- SORBOE, PHIL (Washington St.)—Washington St. College.
- STUHLREHER, HARRY (Wisconsin)—Wisconsin Coaches Assn. (see adv. on p. 62).
- WOLF, RAY (Florida)—U. of Florida.
- YEAGER, JIM (Colorado)—Colorado Coaches Assn. (see adv. on p. 59); U. of Colorado.

## BASKETBALL

- ALEXANDER, LOU (Rochester)—U. of Connecticut (see adv. on p. 59).
- BEE, CLAIR (Long Island U.)—Georgia Coaches Assn.; N. Y. St. Basketball (see adv. on p. 60).
- CASE, EVERETT (No. Carolina St.)—Indiana Basketball.
- COX, FROSTY (Colorado)—Texas Coaches Assn. (see adv. on p. 62).
- CRAWLEY, MARIAN (Jefferson H. S. Ind.)—Colorado Coaches Assn. (see adv. on p. 59); Fremont (see adv. on p. 61).
- CRUM, J. BIRNEY (Allentown, Pa., H. S.)—Eastern Penn. Coaches Assn. (see adv. on p. 61); N. Y. St. Basketball (see adv. on p. 60).
- DAVIES, CHICK (Duquesne)—Ithaca College.
- DIDDLE, ED (West. Kentucky)—Indiana Basketball.
- DRAKE, BRUCE (Oklahoma)—Iowa Ath. Assn.
- FOSTER, BUD (Wisconsin)—Illinois Coaches Assn. (see adv. on p. 61); Wisconsin Coaches Assn. (see adv. on p. 62).
- GRAY, JACK (Texas)—Louisiana Coaches Assn. (see adv. on p. 61).
- IBA, HANK (Oklahoma A. & M.)—Adams St. College (see adv. on p. 59); New Mexico Coaches (see adv. p. 60); Wentworth Mil. Acad. (see adv. on p. 62).
- KEANEY, FRANK (Rhode Island St.)—Eastern Penn. Coaches Assn. (see adv. on p. 61); N. Y. St. Basketball (see adv. on p. 60).
- LAWTHER, JOHN (Penn St.)—Ithaca College; Rhode Island St. Coaches Assn.
- MacMILLAN, DAVE (Minnesota)—U. of Minnesota; Wisconsin Coaches Assn. (see adv. on p. 62).
- PATTON, LEE (West Virginia)—Utah St. Agric. College; Bethany College (see adv. on p. 62).
- PETERSON, VADAL (Utah)—N. Y. Ath. Assn. (see adv. on p. 60).
- READ, BUCK (Western Reserve)—Fremont (see adv. on p. 61).
- RUPP, ADOLPH (Kentucky)—Adams St. College (see adv. on p. 59); Fremont (see adv. on p. 61); Iowa Ath. Assn.; Texas Coaches Assn. (see adv. on p. 62).
- STALCUP, WILBUR (Missouri)—U. of Missouri; Wentworth Mil. Acad. (see adv. on p. 62).
- WELLS, CLIFF (Tulane)—Indiana Basketball.

# COACHING SCHOOL DIRECTORY

**ADAMS ST. TOP-OF-THE-NATION**—Alamosa, Colo. June 9-14. Neal Mehring, director. Courses: Football, Basketball, Training. Staff: Dana X. Bible, Ray Eliot, Blair Cherry, Adolph Rupp, Hank Iba. Tuition: \$25 (+ \$25 for room and board, if desired). See adv. on this page.

**ARKANSAS ST. COLLEGE**—Jonesboro, Ark. Aug. 7-9. Frosty England, director. Staff: Outstanding High School and College Coaches. Tuition: Free.

**BETHANY COLLEGE**—Bethany, W. Va. Aug. 11-15. John J. Knight, director. Courses: Football, Basketball. Staff: Bob Higgins, Red Drew, Lee Patton. Tuition: \$16.50 (+ \$13.50 for room and board). See adv. on page 62.

**COLORADO COACHES ASSN.**—Denver, Colo. Aug. 18-23. N. C. Morris, director. Courses: Football, Basketball, Track, Wrestling. Staff: Glenn Holmes, John Hancock, James Yeager, Bert Hitt, Marian L. Crawley, others. Tuition: Free to state coaches; Others, \$5. See adv. on this page.

**EASTERN PENNA. COACHES ASSN.**—East Stroudsburg, Pa. June 23-28. Marty Baldwin, director. Courses: Football, Basketball. Staff: Dick Harlow, Herman Hickman, Carl Snively, Frank Keaney, J. Birney Crum, C. P. "Neenie" Campbell. Tuition: \$30 (includes room and board). See adv. on page 61.

**EDINBORO COACHING SCHOOL**—Edinboro, Pa. Aug. 12-15. Arthur McComb, director. Course: Football. Staff: Stu Holcomb, Tom Davies. Tuition: \$22.50 (includes room and board).

**FREMONT COACHING SCHOOL**—Fremont, Mich. Aug. 25-27. Lawrence J. Gotschall, director. Courses: Football, Basketball, Training. Staff: Adolph Rupp, Buck Read, Forest England, Jack Hepinstol, others. Tuition: Basketball, \$6.50; Football, \$4; Both, \$10. See adv. on page 61.

**GEORGIA COACHES ASSN.**—Atlanta, Ga. Aug. 14-20. Dwight Keith, director. Courses: Football, Basketball, Training. Staff: Paul Bryant, Clair Bee, J. B. Whitworth, Chick Shiver, Selby Buck, Dickie Butler, Drane Watson, Cliff Kimsey, Jeff West, Eddie Wojacki. Tuition: For members—Football, \$4; Basketball, \$5; Both, \$7.50. For others—Football, \$10; Basketball, \$10; Both, \$15.

**ILLINOIS H. S. COACHES ASSN.**—Champaign, Ill. Aug. 18-22. Norman A. Ziebell, director. Courses: Football, Basketball. Staff: Howie Odell, Bud Foster, Ernie Godfrey, Ray Eliot, Burt Ingwerson, others. Tuition: \$10. See adv. on page 61.

**INDIANA BASKETBALL SCHOOL**—Logansport, Ind. Aug. 18-20. Cliff Wells, director. Staff: Ed Diddle, Everett N. Case, Cliff Wells, Cabby O'Neil, C. R. McConnell. Tuition: \$10.

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Bert Hitt, Grand Junction High School

John Pudlik, Adams City, Colorado, High School

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**IOWA H.S. ATHLETIC ASSN.**—Spirit Lake, Iowa. Aug. 18-22. Lyle T. Quinn, director. Courses: Football, Basketball, Baseball, Training. Staff: Frank Leahy, Adolph Rupp, Bruce Drake, Roland Logan, others. Tuition: \$15.

**ITHACA COLLEGE**—Ithaca, N. Y. Aug. 17-23. I. Yavits, director. Courses: Basketball, Soccer. Staff: John Lawther, Chick Davies, Bill Jeffrey. Tuition: \$10 (+ \$10 for board and lodging).

**KANSAS COACHING ASSN.**—Topeka, Kan. Aug. 18-22. E. A. Thomas, director. Courses: Football, Basketball, Track, Baseball, Wrestling, Training. Staff: To be announced. Tuition: \$10.

**KINGS POINT MARITIME ACAD.**—Kings Point, N. Y. Aug. 27-29. Commander Bill Rhinehart, director. Staff: Famous College and Pro Coaches (names announced next month). Tuition: \$10. See adv. on page 63.

**LOUISIANA H. S. COACHES ASSN.**—Shreveport, La. Aug. 11-15. F. H. Prendergast, director. Courses: Football, Basketball, Track, Baseball, Training. Staff: Skip Palrang, Red Sanders, Jess Thompson, Jack Gray, Rags Turpin, Woodrow Turner. Tuition: State Coaches, \$2; Others, \$10. See adv. on page 61.

**McKINLEY HIGH SCHOOL**—Canton, Ohio. Aug. 11-16. Jimmy Robinson, director. Course: Football. Staff: Illinois and Ohio St. University Staffs. Tuition: Coaches Assn. Members, \$12.50; Others, \$17.50.

**MICHIGAN H. S. ATHLETIC ASSN.** (Lower Peninsula)—Mt. Pleasant, Mich. Aug. 18-22. D. P. Rose, director. Courses: Football, Basketball, Training. Staff: Outstanding High School Coaches. Tuition: \$15 (includes room and board).

**MICHIGAN H. S. ATHLETIC ASSN.** (Upper Peninsula)—Marquette, Mich. Aug. 11-15. C. B. Hedgecock, director. Courses: Football, Basketball, Training. Staff: Outstanding High School Coaches. Tuition: \$15 (includes room and board).

**NEBRASKA H. S. ACTIVITIES ASSN.**—Lincoln, Neb. Aug. 12-15. O. L. Webb and A. J. Lewandowski, directors. Courses: Football, Basketball, Track, Baseball. Staff and Tuition: To be announced.

**NEW MEXICO COACHES ASSN.**—Albuquerque, N. M. Aug. 18-23. Elwood Romney, director. Courses: Football, Basketball, Officiating. Staff: Eddie Anderson, George Sauer, Hank Iba, Chuck Hyatt, others. Tuition: Members of State Assn., \$7.50; Others, \$15. See adv. on this page.

**NEW YORK H. S. ATHLETIC ASSN.**—Ithaca, N. Y. Aug. 25-30. Philip J. Hammes, director. Courses: Football, Basketball, Baseball, Track, Six-Man Football, Training. Staff: Fritz Crisler, Vadal Peterson, Frank

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NEW YORK ST. BASKETBALL SCHOOL—Hancock, N. Y. Aug. 21-23. John E. Sipos, director. Staff: Clair Bee, Frank Keaney, J. Birney Crum, Bunny Leavitt. See adv. on page 60.

OHIO FOOTBALL SCHOOL—Canton, Ohio. Aug. 11-16. J. R. Robinson, director. Staff: Ray Eliot, Wes Fesler. Tuition: \$12.50, Members; \$17.50, Others. See adv. on page 62.

OKLAHOMA ST. COACHES ASSN.—Oklahoma City, Okla. Aug. 18-22. Leo K. Higbie, director. Course: Football. Staff: To be announced. Tuition: \$5.

PENN ST. COLLEGE—State College, Pa. June 10-27 (inter-session); June 30-Aug. 9 (main session); Aug. 11-30, Aug. 11-Sept. 20, Sept. 2-20 (post-sessions). Courses: All Sports, Health and Physical Education. Staff: College Faculty. See adv. on page 62, April issue.

RHODE ISLAND H. S. COACHES ASSN.—Providence, R. I. May 29-June 1. Edward Stebbin, director. Courses: Football, Basketball, Baseball, Track. Staff: Carl Snavely, Herman Hickman, Rip Engle, John Lawther, others. Tuition: \$20.

SOUTH DAKOTA H. S. ATHLETIC ASSN.—(Address undecided.) Aug. 20-23. R. M. Walseth, director. Courses: Football, Basketball. Staff: To be announced. Tuition: Free.

TEXAS H. S. COACHES ASSN.—El Paso, Tex. Aug. 4-8. Harold Dement and Bill Carmichael, directors. Courses: Football, Basketball. Staff: Jess Neely, Joe Davis, Bo McMillin, Adolph Rupp, Frosty Cox. Tuition: Members, \$10; Others, \$15. See adv. on page 62.

UNIVERSITY OF ALABAMA—Tuscaloosa, Ala. Aug. 27-30. H. D. Drew, director. Courses: Football, Basketball, Track, Baseball. Staff: University Staff. Tuition: Free.

UNIVERSITY OF COLORADO—Boulder, Colo. June 12-July 17 (first term); July 19-Aug. 23 (second term). Harry Carlson, director. Courses: Football, Basketball, Track, Gymnastics. Staff: Jim Yeager, Frank Potts, Frank Prentup, Charles Vavra, Roland Balch, Paul Bradley. Tuition: Per term (5 weeks), \$24, resident; \$36.50, non-resident.

UNIVERSITY OF CONNECTICUT—Storrs, Conn. Aug. 25-29. George Van Bibber, director. Courses: Football, Basketball, Baseball, Track, Soccer, Swimming, Six-Man Football. Staff: University Staff, Herman Hickman, George Munger, Paul Bixler, Lou Alexander, others. Tuition: \$10 (+ living expenses). See adv. on page 59.

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ern College

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Canton 3, Ohio

\*\*\*\*\*  
**TEXAS HIGH SCHOOL  
COACHES ASSOCIATION**  
**Annual Coaching School**

\*\*\* August 4-8  
El Paso, Texas  
Headquarters . . . Cortez Hotel

\*\*\* **STAFF**

**JESS NEELY**  
Rice Institute . . . . . Football  
"BO" McMILLIN  
Indiana University . . . . . Football  
**JOE DAVIS**  
Rice Institute . . . . . Football  
**ADOLPH RUPP**  
University of  
Kentucky . . . . . Basketball  
"FROSTY" COX  
University of  
Colorado . . . . . Basketball  
**BOBBY CANNON**  
Edinburg High  
School . . . . . Baseball

\*\*\* **WRITE TO:**

L. W. McConachie—El Paso Pub-  
lic Schools—FOR RESERVATIONS.

**For Particulars Write To:**

Harold Dement, President of  
The Texas High School Coaches  
Ass'n, Galena Park, Tex. . . .  
**OR**  
Bill Carmichael, Executive Sec-  
retary — Texas High School  
Coaches Ass'n, Bryan, Texas.

**UNIVERSITY OF FLORIDA**—Gainesville, Fla.  
Aug. 25-30. Ray Wolf, director. Staff: Ray  
Wolf, Percy Beard, Sam McAllister, others.

**UNIVERSITY OF IOWA**—Iowa City, Iowa.  
June 10-Aug. 6. E. G. Schroeder, direc-  
tor. Courses: Physical Education, Athletics.

**UNIVERSITY OF KENTUCKY**—Lexington, Ky.  
July 14-19. Bernie A. Shively, director.  
Courses: Football, Basketball, Baseball,  
Track. Staff: Adolph Rupp, Paul Bryant,  
others. Tuition: Free.

**UNIVERSITY OF MINNESOTA**—Minneapo-  
lis, Minn. June 16-July 25. Dr. Ralph A.  
Piper, director. Courses: Football, Basket-  
ball, Track, Physical Education. Staff:  
Bernie Bierman, Jim Kelly, Dave MacMil-  
lan, George Svendsen, others. Tuition:  
\$25.80. (Non-resident enrollment limited.)

**UNIVERSITY OF MISSOURI**—Columbia, Mo.  
June 12-14. Don Faurot, director. Courses:  
Football, Basketball, Baseball, Track, Ten-  
nis, Training. Staff: Don Faurot, Tom Botts,  
John Simmons, Wayne Thompson, O. J.  
DeVictor, W. N. Stalcup, others. Tuition:  
\$10. (Free to Missouri High School  
Coaches.)

**UNIVERSITY OF NEBRASKA**—Lincoln, Neb.  
June 16-Aug. 8 (long session); June 16-  
July 23 (short session). Louis E. Means,  
director. Courses: Physical Education,  
Coaching. Staff: University Staff. See adv.  
on page 61.

**UTAH ST. AGRICULTURAL COLLEGE**—Log-  
an, Utah. June 9-13. E. L. "Dick" Rom-  
ney, director. Courses: Football, Basket-  
ball. Staff: Wally Butts, Lee Patton. Tui-  
tion: \$10.

**UTAH H. S. COACHES ASSN.**—Logan,  
Utah. Aug. 25-30.

**WASHINGTON ST. COLLEGE**—Pullman,  
Wash. June 23-Aug. 1. J. Fred Bohler,  
director. Courses: Football, Basketball,  
Track, Physical Education. Staff: Dr. H. H.  
House, Phil Sorboe, A. B. Bailey, Jack  
Friel, Jack Mooberry. Tuition: \$26.

**WENTWORTH MILITARY ACADEMY**—Lex-  
ington, Mo. Aug. 12-15. Capt. Ed "Chink"  
Coleman, director. Courses: Football, Bas-  
ketball, Training. Staff: Don Faurot, Hank  
Iba, Eddie Anderson, Wilbur Stalcup,  
others. Tuition: \$10 (includes room). See  
adv. on this page.

**WILLIAM & MARY**—Williamsburg, Va. July  
14-18. R. N. McCray, director. Courses:  
Football, Basketball, Track, Baseball,  
Training. Staff: R. N. McCray, Marvin  
Bass, Tom Power, R. F. Gallagher. Tuition:  
Free (but must pay for room and board).

**WISCONSIN H. S. COACHES ASSN.**—Madi-  
son, Wis. Aug. 18-23. Harold A. Metzen,  
director. Courses: Football, Basketball.  
Staff: Fritz Crisler, Harry Stuhldreher, Bud  
Foster, Dave MacMillan, others. Tuition:  
\$1, Members; \$10, Others. See adv. on  
this page.

**WISCONSIN  
HIGH SCHOOL COACHES  
ASSOCIATION  
COACHING SCHOOL**

—AUG. 18-23—  
U. of Wisconsin, Madison

**FOOTBALL**  
FRITZ CRISLER, Michigan  
HARRY STUHLREHER & Staff, Wisconsin  
OUTSTANDING H. S. COACHES

**BASKETBALL**  
DAVE MacMILLAN, Minnesota  
BUD FOSTER & Staff, Wisconsin  
OUTSTANDING H. S. COACHES

Tuition: \$1. Members; \$10. Others

**ADDED FEATURES**

1. Entire proceedings mimeographed and dis-  
tributed free.
2. All-Star Football Game on Aug. 23.
3. Enjoy golf, tennis, swimming, fishing, and  
all other vacation sports.
4. Room and board available in lakeside dormi-  
tories.
5. Smokers, panel discussions, sports movies in  
evening.
6. Annual banquet, golf tournament, jamboree.

—For further information write to:—

**HAROLD A. METZEN**  
Director, Wisconsin High School  
U. of Wisconsin, Madison 6, Wis.

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**SECOND  
ANNUAL**

**BETHANY COLLEGE  
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August 11-15, 1947  
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of Penn State

HAROLD D. "RED" DREW  
of the University of Alabama

**BASKETBALL**  
LEE PATTON  
of West Virginia University

ALL STAR GAME NIGHT OF  
AUGUST 15, 1947

**JOHN J. KNIGHT** \*\*\*\*\*  
Director \*\*\*\*\*  
**BETHANY, W. VA.** \*\*\*\*\*

**WENTWORTH MILITARY ACADEMY  
COACHING SCHOOL**

Don Faurot—Missouri Univ. FEE  
Eddie Anderson—Iowa Univ. \$10  
Henry Iba—Oklahoma (ten)  
Wilbur Stalcup—Missouri Univ.  
All demonstrations on the field—all sports  
**Write** CAPT. CHINK COLEMAN  
LEXINGTON, MISSOURI